SIEMENS

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ARCADIS

SP

Installation and Startup

Option

WLAN Expansion

These instructions are intended for installation and startup of the WLAN Expansion in ARCADIS Varic systems, Mat. Nos. 08080017 and 10143406,
ARCADIS Orbic, Mat. Nos. 08081080 and 10143407
and
ARCADIS Avantic, Mat. Nos. 10048590 and 10143408

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Please contact your local Siemens office to order current revision levels.

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Required Documents, Parts, Tools, Measuring Devices and Auxiliary Materials

Required Documents

- System binder
  - ➪ Contained in the system monitor carriage.
- SP Password List
  - ➪ See the SIEMENS MED CS Intranet, Knowledge Base, SP Password List.

Required Parts

- WLAN Expansion, 10143417 or 10143422 (USA / Canada)

Required Tools

- Standard tool kit
- 1 set of Allen keys

Required Measuring Devices and Auxiliary Equipment

- Ground wire test meter, e.g. UNIMET1100 Safety Tester, Mat. No. 05130727

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Prerequisites

Configured Options

- The following options for the monitor carriage, 10143404, must be installed prior to installing the WLAN Expansion:
  - ➪ 2-part network connection, Mat. No. 10143416
  - ➪ "Options" installation kit, Mat. No. 10143423
- The following options for the monitor carriage, 07552024, must be installed prior to installing the WLAN Expansion:
  - ➪ 2-part network connection, Mat. No. 08079845

ARCADIS Image System Computer Network Configuration

- The network configuration for the ARCADIS image system PC must already be performed. If needed, the network configuration must be performed according to the document "Vxyz Configuration" (Vxyz stands as a place holder for the software version) of the ARCADIS system. See the CB-Doc for the system.
  - ➪ If needed, the network configuration must be performed according to the document "VA10A Configuration" (VA10A stands as a place holder for the current software version) of the ARCADIS system. See the CB-Doc for the system.
- A fixed IP address + Subnet mask is needed for both the image system computer and the system WLAN Client.

NOTE	**Both IP addresses and Subnet masks must be in the same network segment.**

Inquiring the Network Configuration Data prior to Installing the WLAN Client

- To ensure quick startup during installation and startup of the WLAN Client, the network configuration data must be inquired from the customer's network administrator prior to startup. For this, an appropriate inquiry list is appended in the chapter "List of Network Configuration Specifications". This can be handed to the network administrator to define the configuration data.
- Additional and more detailed information about the network configuration of the WLAN Client can be found among the items included in the shipment of the CD-ROM for the WLAN Client.
  - ➪ See the CD-ROM "doc" directory, "BA_SCALANCE-W784-1xx-W74x-1_0.pdf" file.

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Note regarding Connection to SIEMENS Remote Services

- With ARCADIS systems, it is recommended to perform connection of SIEMENS Remote Services according to the document "SIEMENS Remote Services, Configuration". See the CB-Doc for the system.
- For ARCADIS systems beginning with software version VC10A, it is also recommended to configure SRS System Management (MNP) to establish RUH capability for the system.

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Safety Information

General safety information (in existing documents)

⚠WARNING

Danger of injuries, death or material damage.

Non-compliance can lead to death, injury or material damage.

Please note:

- ➪ **The product-specific safety notes in these instructions,**
- ➪ **The general safety information in TD00-000.860.01... and**
- ➪ **The safety information in accordance with ARTD Part 2.**

General electrical safety information

⚠WARNING

Electrical safety!

Non-compliance can lead to severe injury or even death, as well as material damage.

- ➪ **Parts under electrical voltage are accessible when the covers are open. To avoid danger, disconnect the system from the power supply before opening the covers. Disconnect the power plug.**
- ➪ **If an uninterruptible power supply (UPS) is installed in the system, the voltage output of the UPS must also be deenergized or the voltage output plug must be disconnected.**
- ➪ **If work steps must be performed using electrical power, the general safety information according to TD00-000.860.01 must be observed.**

⚠CAUTION

Electrical voltage!

Non-compliance can result in material damage.

- ➪ **When working on the system, ESD regulations must be observed.**

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Mechanical safety information

⚠CAUTION

Risk of burns from hot parts or components!

If not observed, minor to more severe burns, especially on the hands, can occur.

- ➪ **Parts and components (e.g., power components, cooling fin, electromagnetic brakes) that can exceed 50 degrees Celsius during operation are accessible after the covers are opened. To avoid burns, switch the system off before touching parts or components and allow at least 5 minutes for it to cool down.**

⚠CAUTION

Risk of injury from mechanical parts!

If not observed, minor to more severe injury, especially to the hands, can occur.

- ➪ **The C-arm of the system is manufactured from a carbon fiber composite material. If the carbon fiber structure is damaged, by collision, cuts or scrapes by tools, etc., individual carbon fibers or carbon fiber bundles can protrude and injure the skin or penetrate the tissue of the hand upon contact.**
- ➪ **Before starting work on the C-arm, make sure that the carbon fiber structures are undamaged (visual inspection).**
- ➪ **If smaller superficial damage is detectable in the painted area or in the area of the running surface edges of the C-arm, wear work gloves and remove any protruding carbon fibers. Then carefully sand the damaged areas flat with fine emery cloth and seal the damaged surface with paint. A spray paint in the color of the C-arm can be used for this purpose (see the Service Tool Catalog).**
- ➪ **Remove any carbon fibers lying in the C-arm profile with a damp sponge or cloth.**
- ➪ **If greater damage to the carbon fiber structure indicating general or large-scale destruction of the carbon fiber structure (e.g., crack formation or flaked-off places on the running surfaces with torn carbon fibers) can be detected, replace the C-arm.**

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⚠CAUTION

Risk of injury from mechanical parts!

If not observed, minor to more severe injury, especially to the hands, can occur.

- **After the covers are opened, parts such as flat plugs, threaded bolts, cut-off cable ties and component edges are exposed, and if care is not taken, they can cause crushing, scrapes and cuts to the skin, particularly to the hands.**
- **Perform the required work with special care and attention to detail.**
- **If necessary, wear work gloves.**

Radiation safety information

⚠WARNING

X-ray radiation!

Non-compliance can lead to illness, irreversible damage to body cells and the genotype, severe injury and even death.

During work on the system in which radiation must be released, the radiation protection directives and the rules for radiation protection according to ARTD-002.731.02.. must be complied with.

Please note:

- **Use available radiation protection devices.**
- **Wear radiation protection clothing (lead apron).**
- **Stay as far away as possible from the radiation source.**
- **Release radiation only if necessary.**
- **Set the radiation activity as low as possible. (Low kV and mA values, short radiation time)**
- **Release radiation for as short a time as possible.**
- **Checks requiring the release of radiation are identified by the radiation warning symbol shown on the left.**

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Safety information - risk of infection

⚠WARNING

Risk of infection due to pathogens!

Non-compliance can lead to severe injury and even death.

- ➪ **This product can be contaminated with infected blood or other bodily fluids.**
- ➪ **Avoid all contact with blood or other bodily fluids!**
- ➪ **Strictly observe the safety information in ARTD-002.731.37.. regarding prevention of infectious diseases during customer service calls.**

Information on the protective conductor resistance test

Observe the instructions in the "Safety Rules for Installation and Repair" (ARTD-002.731.17 ...).

The protective conductor resistance must be measured after every intervention in the system.

However, documentation of the measured values is required only during periodic safety checks.

If parts/components that can significantly influence the protective conductor resistance (e.g., replacement of the power cable, replacement of the power-up module, replacement of multi-pole connection cables which also create the protective conductor connection between system parts (e.g., monitor cable or C-arm cable)) are replaced or if protective conductor connections have been repaired, the protective conductor resistance must be measured. The values must be documented and evaluated in the protective conductor resistance protocol.

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NOTE

For evaluation purposes, the first measured value and the values documented during maintenance or safety checks must be compared to the measured values. A sudden or unexpected increase in the measured values may indicate a defect in the protective conductor connections - even if the limit value of 0.2 ohms is not exceeded. (Protective conductor or contacts).

The measurement must be performed according to DIN VDE 0751, Part 1 (see ARTD Part 2). The protective conductor resistance for all touchable conductive parts must be measured during the normal operating state of the system.

Make sure that control cables or data cables between the components of the system are not mistaken for protective conductor connections.

During the measurement, the power cable and additional connection cables which also create the protective conductor connection between system parts (e.g. monitor cable between the basic unit and monitor trolley) must be moved section by section to detect cable breaks.

The protective conductor resistance must not exceed 0.2 Ohms.

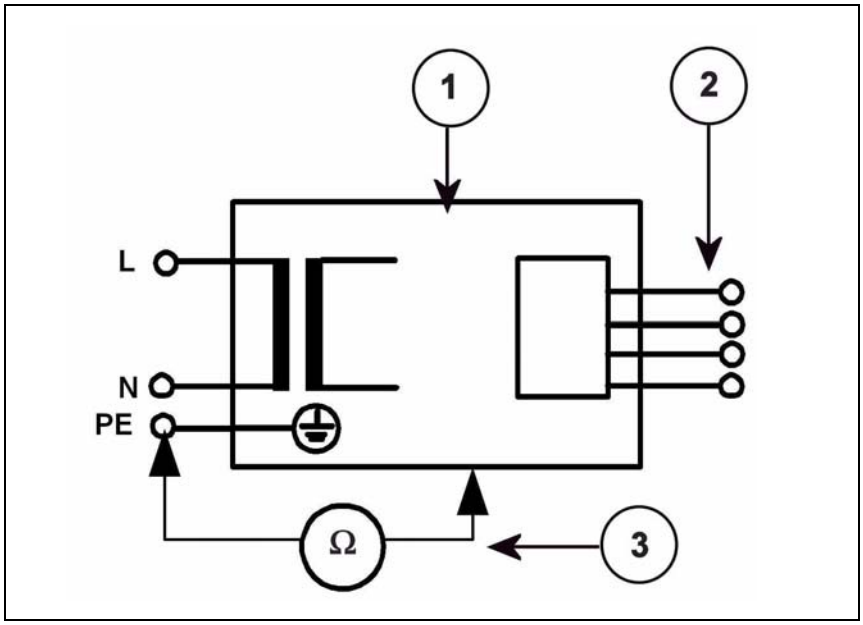

Fig. 1: Measuring circuit for measuring the protective conductor resistance for units that are disconnected from power, in compliance with DIN VDE 0751-1/2001-10, Fig. C2.

Pos. 1 = System

Pos. 2 = Application part type B (if available)

Pos. 3 = Measurement setup (integrated into measuring device)

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Installation with the Monitor Carriage, 07552024

NOTE

Perform this section only if the monitor carriage, 07552024, is configured.

NOTE

As a prerequisite for installation, the 2-part network connection, 08079845, must already be installed.

If this is not the case, install the 2-part network connection according to these installation instructions prior to installing the WLAN Expansion.

Overview of Required Parts

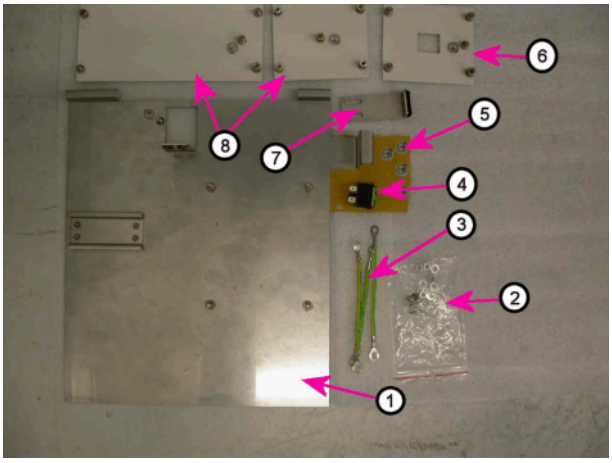

Fig. 2: WLAN Installation Parts

Pos. 1	Mounting plate
Pos. 2	Small parts (screws / nuts / plate washers)
Pos. 3	Ground wire
Pos. 4	WLAN power switch
Pos. 5	Ground wire symbol label
Pos. 6	Cover panel for WLAN power switch
Pos. 7	Mounting plate
Pos. 8	Blank cover panels

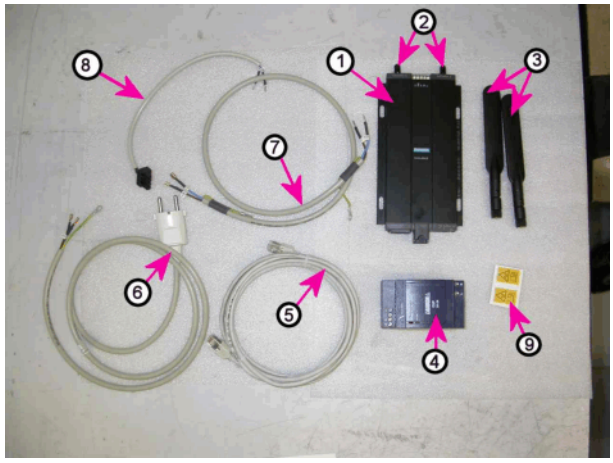

Fig. 3: WLAN electronics, cables and labels

Pos. 1	WLAN Client
Pos. 2	WLAN Client antenna sockets
Pos. 3	WLAN Client antennas
Pos. 4	WLAN power supply
Pos. 5	WLAN Client RJ45 cable - network switch
Pos. 6	WLAN power switch cable, power outlet strip
Pos. 7	WLAN power switch cable - WLAN power supply
Pos. 8	24V WLAN Client cable - WLAN power supply
Pos. 9	Label with reference to the Operator Manual

Removing the Cover Panels

- Remove the large, rear cover panel on the monitor carriage.
- Remove the large, right side cover panel on the monitor carriage.
- Remove the top, rear cover panel (connection terminal) on the monitor carriage.

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Installing the WLAN Parts on the Mounting Plate

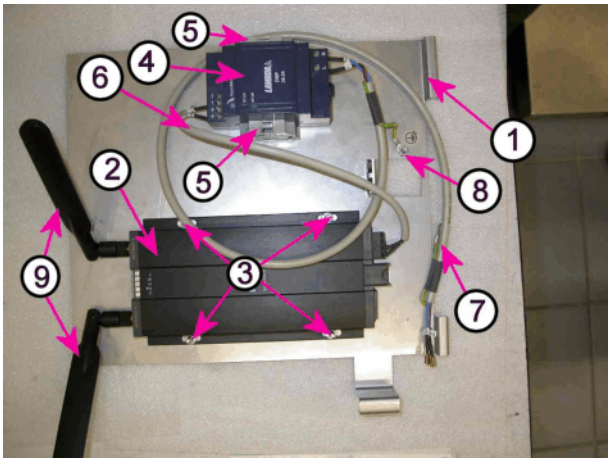

Fig. 4: WLAN Client installed on the mounting plate

Pos. 1 Mounting plate
Pos. 2 WLAN Client
Pos. 3 WLAN Client mounting points
Pos. 4 Power supply
Pos. 5 End pieces for the cap rail
Pos. 6 24V power supply connection cable - WLAN Client
Pos. 7 Power supply power cable - WLAN power switch
Pos. 8 Threaded studs for ground wire connection
Pos. 9 WLAN antennas, installed

Installing the WLAN Client

- Insert the antennas (2/Fig. 3 / p. 13) and tighten the threads at both WLAN Client antenna sockets (3/Fig. 3 / p. 13).
  - ➪ The illustration (Fig. 4 / p. 14) shows the approximate desired location of the antennas following installation in the monitor carriages.
- Place the WLAN Client (2/Fig. 4 / p. 14) as shown on the threaded studs (3/Fig. 4 / p. 14) on the mounting plate (1/Fig. 4 / p. 14) and secure it in place with washers and nuts.

Installing the WLAN Power Supply

- Place the WLAN power supply (4/Fig. 4 / p. 14) on the existing cap rail and snap it in place.
  - ➪ If the power supply cannot be snapped in place, slightly pull out the latching lever on the power supply (8/Fig. 13 / p. 21) and press the power supply onto the cap rail. Let go of the latching lever. Check for correct seating of the power supply on the cap rail.
- Place the two end pieces (5/Fig. 4 / p. 14) to secure the power supply on the cap rail and secure them in place.
  - ➪ The power supply is secured against moving sideways on the cap rail.

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Wiring of the Power Cable on the WLAN Power Supply

- Connect the power supply power cable to the WLAN power switch (7/Fig. 4 / p. 14) on the power supply (4/Fig. 4 / p. 14).
  - ➪ Attach the M15L cable end to WLAN power supply terminal L.
  - ➪ Attach the M15N cable end to WLAN power supply terminal N.
  - ➪ Cut open the heat-shrink tubing around the power cable and the trailing attached ground wire and remove it.
  - ➪ Attach the ground wire (yellow/green cable end) to the threaded stud on the mounting plate (8/Fig. 4 / p. 14) (with a contact washer, plate washer and nut). Check for good contact of the ground wire to the mounting plate.

NOTE	**Laying the power cable to the WLAN power switch is possible only after installing the complete mounting plate and is described in the section "Installing and Cabling the WLAN Power Switch".**

Wiring of the 24V Cable on the WLAN Power Supply

- Wire the 24V connection lead (6/Fig. 4 / p. 14) on the WLAN power supply.
  - ➪ Connect the L1+ cable end to the power supply + terminal.
  - ➪ Connect the M1 cable end to the power supply - terminal.

Wiring of the 24V Cable on the WLAN Client

- Wire the 24V connection lead (6/Fig. 4 / p. 14) from the WLAN power supply to the WLAN Client.

NOTE	**The WLAN Client is shipped with a 4-pole coupling to connect the DC voltage power supply. To wire the coupling, unplug it from the WLAN Client "DC24V 0.25A" socket. The cable terminals for the coupling will then be accessible.**

  - ➪ Connect the L1+ cable end to the L1+ coupling.
  - ➪ Connect the M1 cable end to the M1 coupling.
  - ➪ Plug the coupling back into the "DC24V 0.25A" socket on the WLAN Client. The plug-in connection is designed so that the poling is always correct.

Aligning the WLAN Antennas

- Align the two WLAN antennas inside the monitor carriage about as shown in (9/Fig. 4 / p. 14).

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Installing the Mounting Plate in the Monitor Carriage

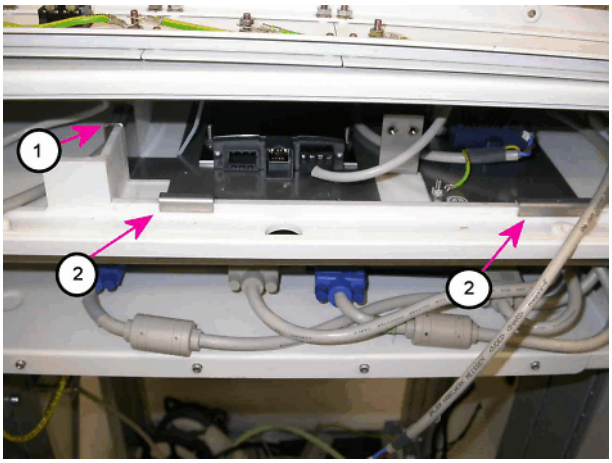

Fig. 5: Mounting plate in the monitor carriage

Pos. 1 Guide bracket, side

Pos. 2 Guide brackets, rear

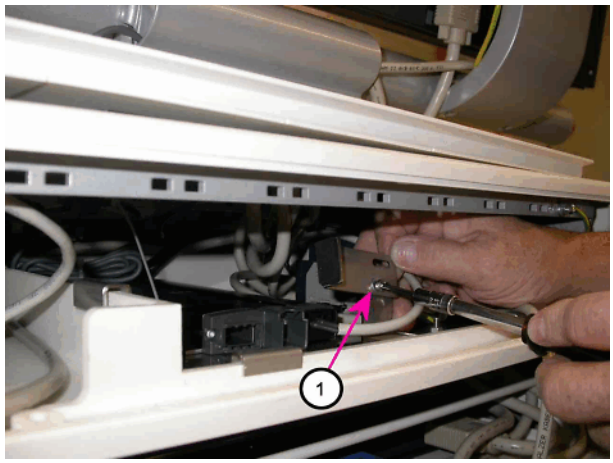

Fig. 6: Installing the mounting bracket

Pos. 1 Securing the mounting bracket with mounting plate

- Insert the mounting plate completely into the top compartment of the monitor carriage from behind.
  - ➪ The side guide bracket (1/Fig. 5 / p. 16) is on the vertical ledge.
  - ➪ The rear guide brackets (2/Fig. 5 / p. 16) are on the rear ledge of the monitor carriage.
- Install the mounting bracket (1/Fig. 6 / p. 16) with a screw and washer on the mounting plate, but do not tighten it yet.
- Hold the mounting bracket vertically and thread in the 2nd screw with washer, but do not tighten it yet.
- Slide the mounting bracket up to the stop and tighten it in place.
  - ➪ The mounting plate can no longer be lifted out of the rear guide brackets.

Wiring the Network Cable

- Plug in the network cable that is provided to the RJ45 socket on the WLAN Client.
- Lay the network cable from the WLAN Client to the existing network switch (network hub).
- Plug in the network cable at one of the free RJ45 sockets on the network switch.

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Installing and Wiring the Power Switch

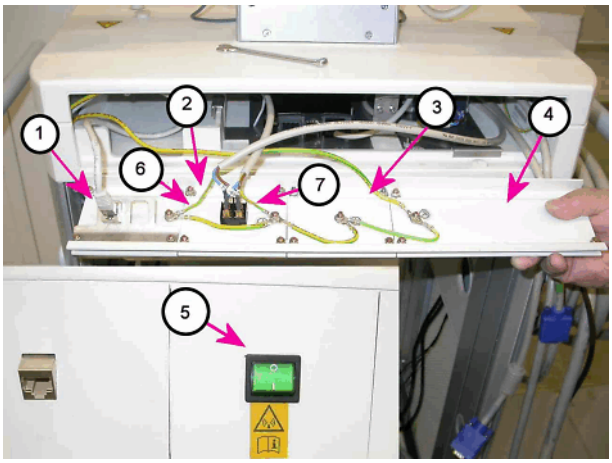

Fig. 7: Connection terminal, already installed

Pos. 1	Cover panel with RJ45 network sockets
Pos. 2	Cover panel for WLAN power switch
Pos. 3	Blank cover panel, short
Pos. 4	Blank cover panel, long
Pos. 5	Illustration of the power switch installation location
Pos. 6	Power cable ground wire to power outlet strip
Pos. 7	Power cable ground wire to the WLAN power supply

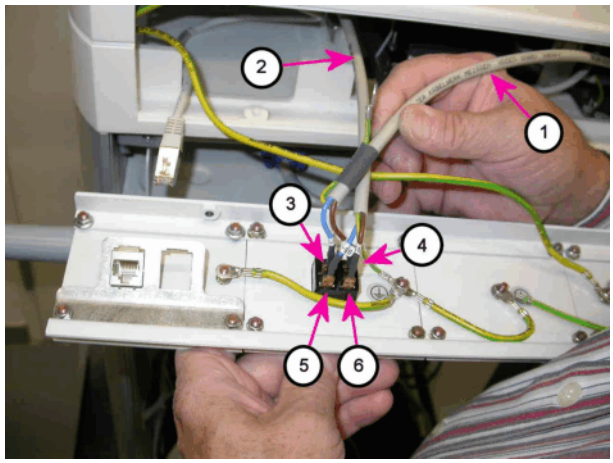

Fig. 8: WLAN power switch wiring

Pos. 1	Power supply power cable 1 (power switch - WLAN power supply)
Pos. 2	Power supply power cable 2 (power switch - power outlet strip)
Pos. 3	Power cable 1 blue lead
Pos. 4	Power cable 1 brown lead
Pos. 5	Power cable 2 blue lead
Pos. 6	Power cable 2 brown lead

Installing the new Cover Panels on the Connection Terminal

- The cover panel with the RJ45 network sockets (1/Fig. 7 / p. 17) remains installed.
- Remove the old cover panel(s) next to the cover panel with the RJ45 network sockets on the connection terminal. The nuts and ground wire connections are needed again for the following installation of new cover panels.
- Install the new cover panel for the WLAN power switch (2/Fig. 7 / p. 17).
- Install the new short (3/Fig. 7 / p. 17) and long (4/Fig. 7 / p. 17) blank cover panel.

Installing the WLAN Power Switch

- Press the power switch (4/Fig. 2 / p. 13) into the cover panel for the WLAN power switch from the outside. The installation location can be seen in (5/Fig. 7 / p. 17).

Wiring the WLAN Power Switch with the WLAN Power Supply

- Lay the power cable coming from the WLAN power supply (1/Fig. 8 / p. 17) to WLAN power switch.
- Plug in the cable with the designation S15.1A on the power switch (3/Fig. 8 / p. 17).
- Plug in the cable with the designation S15.2A on the power switch (4/Fig. 8 / p. 17).
- Cut open the heat-shrink tubing around the power cable and the trailing attached ground wire and remove it.
- Connect the ground wire to the connection terminal.

Wiring the WLAN Power Switch with the Power Outlet Strip

- Lay the power cable (6/Fig. 3 / p. 13) from the power outlet strip to the side between the side cover panel and the monitor carriage up and into the top compartment.

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- Plug in the S15.1 cable on the power switch (5/Fig. 8 / p. 17).
- Plug in the S15.2 cable on the power switch (6/Fig. 8 / p. 17).
- Cut open the heat-shrink tubing around the power cable and the trailing attached ground wire and remove it.
- Connect the ground wire to the connection terminal.
- Connect the attached power connector on the power cable to the existing power outlet strip.

Laying out the Ground Wiring at the Connection Terminal

- Lay out the grounding wires at the connection terminal as shown in (Fig. 7 / p. 17). When doing this, also secure the ground wire connections for the new power cables. See (6/Fig. 7 / p. 17) and (7/Fig. 7 / p. 17).
  - ➪ Make sure that the ground wire connection coming from the monitor carriage is securely connected.
  - ➪ Make sure that all ground wire connections have good contact.

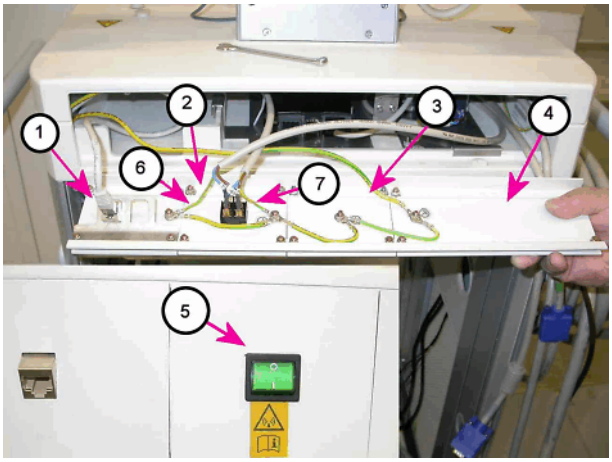

Fig. 9: Connection terminal, already installed

Pos. 1 Cover panel with RJ45 network sockets
Pos. 2 Cover panel for WLAN power switch
Pos. 3 Blank cover panel, short
Pos. 4 Blank cover panel, long
Pos. 5 Illustration of the power switch installation location
Pos. 6 Power cable ground wire to power outlet strip
Pos. 7 Power cable ground wire to the WLAN power supply

Fig. 10: Label with reference to the User Manual

Labels with the Reference Symbol to the Operator Manual

- Attach one of the labels with the warning symbol for non-ionizing radiation and a reference symbol to to the Operator Manual along side one another, below the WLAN power switch.
- Attach the 2nd label with the warning symbol for non-ionizing radiation and the 2nd reference symbol to the Operator Manual on the top console of the monitor carriage, centered between the base of the monitor base and the inset to store the mouse (= location of the signal source below the console, centered to the signal antennas of the WLAN Client).

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Attaching the newly laid Cables

- Secure the newly laid cables in the monitor carriage using cable ties. When doing this, make sure that the cables cannot become pinched by cover panels when installing them.

Installing the Connection Terminal and Closing the Side Covert Panels

- Reinstall the connection terminal on the monitor carriage. When doing this, make sure that the ground wire connection has good contact.
- Reinstall the side cover panels on the monitor carriage. Make sure that the ground wire connections have good contact.

NOTE	**Do not yet install the large, rear cover panel.**

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Installation with the Monitor Carriage, 10143404

NOTE

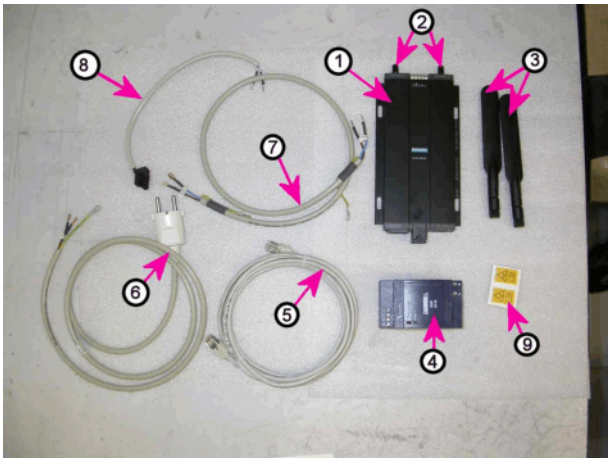
Perform this section only if the monitor carriage, 10143404, is configured.

NOTE

As a prerequisite for installation, the 2-part network connection, 10143416, must already be installed.

If this is not the case, install the 2-part network connection according to these installation instructions prior to installing the WLAN Expansion.

Overview of Required Parts



Parts not shown:

- WLAN power switch
- End pieces for the cap rail

Fig. 11: WLAN electronics, cables and labels

Pos. 1	WLAN Client
Pos. 2	WLAN Client antenna sockets
Pos. 3	WLAN Client antennas
Pos. 4	WLAN power supply
Pos. 5	WLAN Client RJ45 cable - network switch
Pos. 6	WLAN power switch cable, power outlet strip
Pos. 7	WLAN power switch cable - WLAN power supply
Pos. 8	24V WLAN Client cable - WLAN power supply
Pos. 9	Label with reference to the Operator Manual

Removing the Cover Panels

- Remove the large, rear cover panel on the monitor carriage.
- Remove the small cover panel on the right (network connection panel) on the monitor carriage.
- Remove the cover panels on the right and left sides on the monitor carriage.

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Installing the WLAN Parts in the Monitor Carriage

Installing the WLAN Client

Fig. 12: WLAN Client with installed antennas

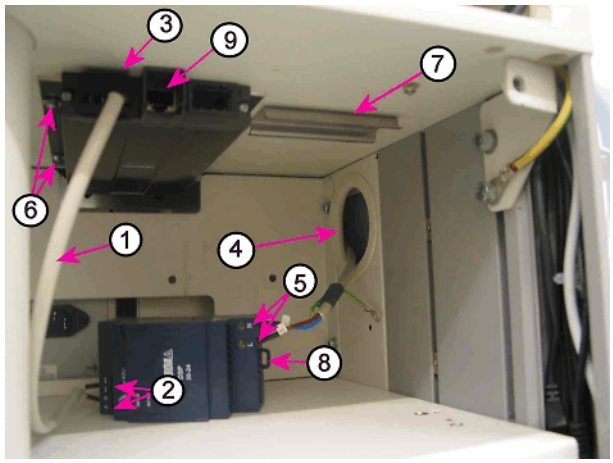

Fig. 13: WLAN Client and power supply

Pos. 1	24V power supply connection cable - WLAN Client
Pos. 2	Power supply terminals, 24V DC output
Pos. 3	WLAN Client, 24V power supply
Pos. 4	Cable opening
Pos. 5	Power supply terminals, 230V AC input
Pos. 6	WLAN Client mounting points
Pos. 7	Cap rail for installing the power supply
Pos. 8	Power supply latch/release lever, cap rail
Pos. 9	WLAN Client network socket

- Insert the antennas and tighten the threads at both WLAN Client antenna sockets. See (Fig. 12 / p. 21).
- When installing the WLAN Client, insert the two antennas through the opening in the front of the compartment. The opening is visible in (Fig. 13 / p. 21) behind the installed WLAN Client.
- When inserting the antennas into the opening, angle them 90 degrees at their pivot point. Turn the antennas so that they point out to the right and left and are pointing up at an angle of 30 degrees.
- Secure the WLAN Client on the bottom of the plastic compartment base with 4 metal screws (with a thread for use with plastic). See (6/Fig. 13 / p. 21).

Installing the WLAN Power Supply

- Place the WLAN power supply on the existing cap rail (7/Fig. 13 / p. 21) and snap it in place.

  ➪ If the power supply cannot be snapped in place, slightly pull out the latching lever (8/Fig. 13 / p. 21) and press the power supply onto the cap rail. Let go of the latching lever. Check for correct seating of the power supply on the cap rail.

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- Place the two end pieces (5/Fig. 4 / p. 14) to secure the power supply on the cap rail and secure them in place.
  - ➪ The power supply is secured against moving sideways on the cap rail.

Cabling the WLAN Client

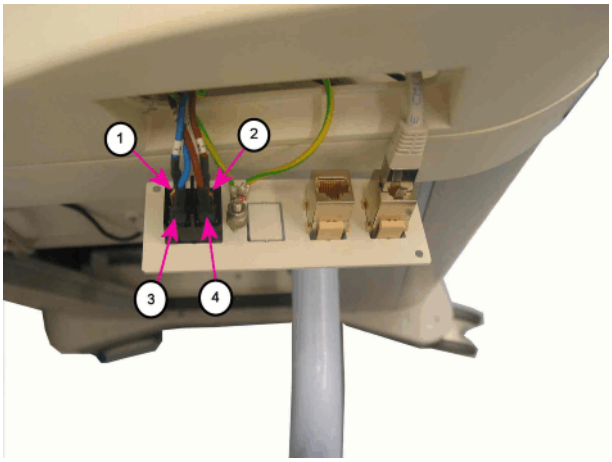

Fig. 14: WLAN power switch

Pos. 1	WLAN power supply cable, S15.1A power switch
Pos. 2	WLAN power supply cable, S15.2A power switch
Pos. 3	Power outlet strip cable - S15.1 power switch
Pos. 4	Power outlet strip cable - S15.2 power switch

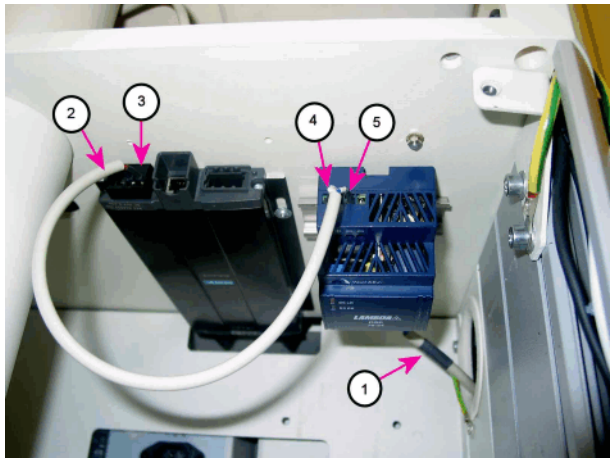

Fig. 15: WLAN Client wiring

Pos. 1	WLAN power supply cable - WLAN power switch
Pos. 2	24V WLAN power supply cable - WLAN Client
Pos. 3	24V power supply coupling WLAN Client
Pos. 4	WLAN Client 24V+ terminal
Pos. 5	WLAN Client 24V- terminal

Wiring of the 24V Cable on the WLAN Power Supply

- Wire the 24V connection lead on the WLAN power supply.
  - ➪ Connect the L1+ cable end to the power supply + terminal. See (4/Fig. 15 / p. 22).
  - ➪ Connect the M1 cable end to the power supply - terminal. See (5/Fig. 15 / p. 22).

Wiring of the 24V Cable on the WLAN Client

- Wire the 24V connection lead from the WLAN power supply to the WLAN Client.

NOTE

The WLAN Client is shipped with a 4-pole coupling to connect the DC voltage power supply. To wire the coupling, unplug it from the WLAN Client "DC24V 0.25A" socket. The cable terminals for the coupling will then be accessible.

  - ➪ Connect the L1+ cable end to the L1+ coupling. See (3/Fig. 15 / p. 22).
  - ➪ Connect the M1 cable end to the M1 coupling. See (2/Fig. 15 / p. 22).
  - ➪ Plug the coupling back into the "DC24V 0.25A" socket on the WLAN Client. The plug-in connection is designed so that the poling is always correct.

Installing the WLAN Power Supply

- Remove the small side cover panel. See (Fig. 14 / p. 22).
- Break out the left perforated metal section from the cover panel.

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- Press the power switch into the break-out. See (Fig. 14 / p. 22).
  - ➪ Installation location of the switch: 0 label = top; 1 label = bottom.

Wiring of the WLAN Power Supply Power Cable - Power Switch

- Lay the cable from the WLAN power supply through the round opening (4/Fig. 13 / p. 21) up to the inside of the top compartment to the WLAN power switch.
- Connect the cable with the designation M15 L on the WLAN power supply, terminal L (5/Fig. 13 / p. 21).
- Connect the cable with the designation M15 N on the WLAN power supply, terminal N (5/Fig. 13 / p. 21).
- Plug in the cable with the designation S15.1A on the power switch (1/Fig. 14 / p. 22).
- Plug in the cable with the designation S15.2A on the power switch (2/Fig. 14 / p. 22).

NOTE	**The loose ground wire covered with heat-shrink tubing that is from the power cable does not have to be connected at both ends.**

Wiring the WLAN Power Switch with the Power Outlet Strip

- Lay the cable from the power outlet strip up to the WLAN power switch.
- Plug in the cable with the designation S15.1 on the power switch (3/Fig. 14 / p. 22).
- Plug in the cable with the designation S15.2 on the power switch (4/Fig. 14 / p. 22).
- Plug in the three-prong connector at the power outlet strip.

NOTE	**The loose ground wire from the power cable (switch side) does not have to be connected. A ground wire connection to the monitor carriage is already connected.**

Wiring the Network Cable

- Plug in the new network cable on the RJ45 socket on the WLAN Client (9/Fig. 13 / p. 21) and lay it to the side to the existing network switch.
- Plug in the other end of the network cable at the next free socket on the network switch.
- Secure the cable at suitable locations using cable ties.

Labels

- Attach one of the labels with the warning symbol for non-ionizing radiation and a reference symbol to to the Operator Manual along side each other next to the WLAN power switch.
- Attach the 2nd label with the warning symbol for non-ionizing radiation and the 2nd reference symbol to the Operator Manual on the top console of the monitor carriage, directly below the cable outlet for the mouse (= location of the signal source below the console, centered to the signal antennas of the WLAN Client).

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WLAN Primary Setup

NOTE

The network connection between the WLAN Client and the image system PC can be established using the Primary Setup Tool. For this, the Primary Setup Tool must be installed from the CD on the image system PC.

Other programming is then performed using the integrated HTML server of the WLAN Client.

Installation of the Primary Setup Tool

Logging off as the "Meduser" and Logging in as the "Administrator"

NOTE

Installation of the Primary Setup Tool requires administrator privileges on the image system PC.

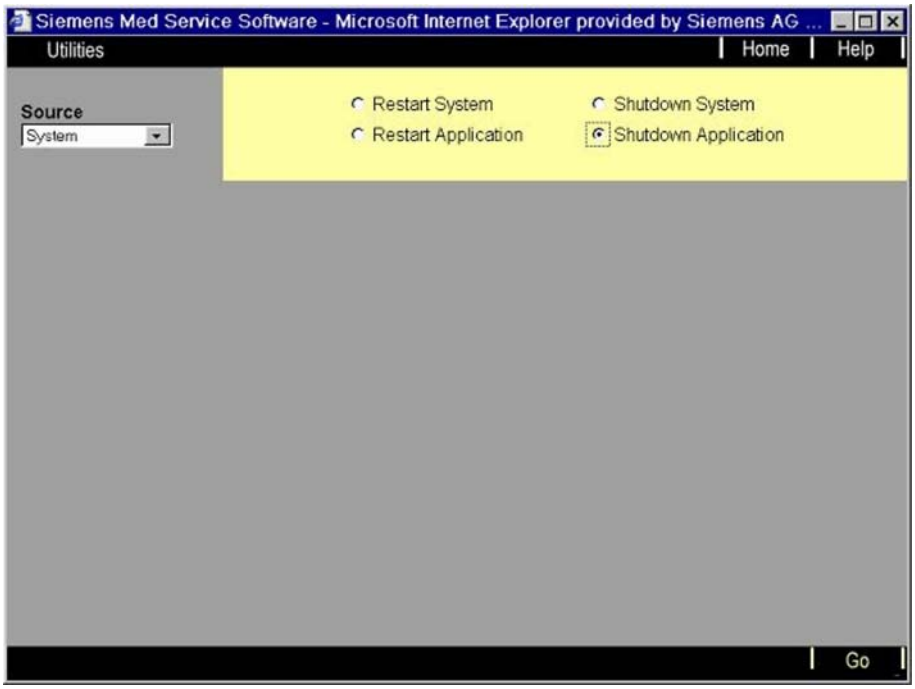

Fig. 16: Utilities shutdown application

- The system is booted up and and ready.
- Start local service and enter the password.
- Click on <Utilities> in the Main menu.
- Select "System" under <Utilities> - <System>.
- Select "Shutdown Application" and click on <Go>.

  ➪ The message “Application Shutdown was selected. Are you sure? appears.

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- Confirm the selection by clicking on <OK>.
  - ➪ The Syngo application is ended.
  - ➪ The system shuts down to the Windows XP level.
  - ➪ Wait until the message "Shutdown of Application finished.." is displayed.
- Select the <Start> button and <Shut Down> in the Windows menu task bar.
- Select "Log off meduser".
- Press the key to switch to lower/upper case letters (Shift key) and hold it. Then click on <OK>.
  - ➪ After a few seconds, the “Log on” window appears.

NOTE	**If the "Log on" window is not displayed and the Syngo application boots up again on its own (with limited "meduser" privileges), perform the procedure again.**

- Enter **administrator** as the "User name".
- Enter the administrator password as the "Password" (see the SP password List).

NOTE	**If the default password listed in the SP Password List was changed on site, proceed as follows:** **Select <Configuration> - <Next> in the "Service" menu.** **In the "Local Host" menu, click on <Users>.** **Enter the password from the SP Password List in the "Account for administrator" box and confirm again.** **Then click on <Save>.** **Then log out again as described above and log in as the administrator.**

- Click on <OK>.
  - ➪ After a few seconds, you will be logged in the Windows XP operating system with administrator privileges.

Installation

NOTE	**Installation of the Primary Setup Tool requires administrator privileges on the image system PC. See above**

- Start Windows Explorer. To do so, from the Windows menu select <Start> - <Programs> - <Accessories> and start Windows Explorer by clicking on the <Windows Explorer> icon.
- Insert the CD included in the WLAN installation kit into the CD/DVD drive. Wait a few seconds until the CD is automatically read.

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- Click on the R:\ drive in Windows Explorer.

  ➪ The contents of the CD will be displayed.

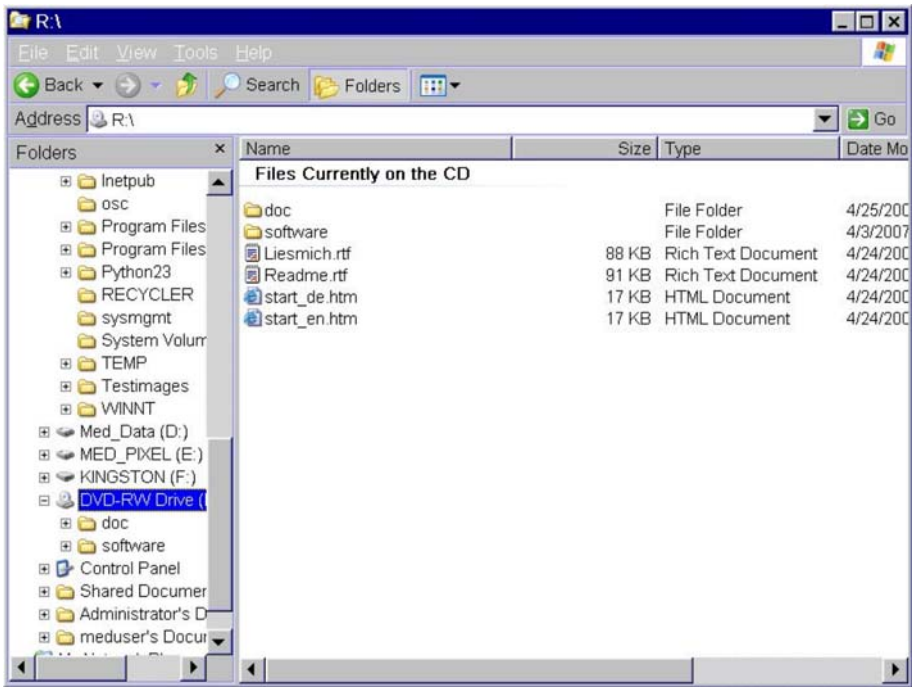

Fig. 17: WLAN Client, contents of the CD

- Open the subdirectory <software> - <PST_V3.2.0.0_5.1.0.2>.

  ➪ The contents of the subdirectory will be displayed.

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NOTE

When this document was generated, the PST Tool version V3.2.0.0._5.1.0.2 was current. The version designation can vary.

Then open the particular <PST Tool_V (new version)> directory.

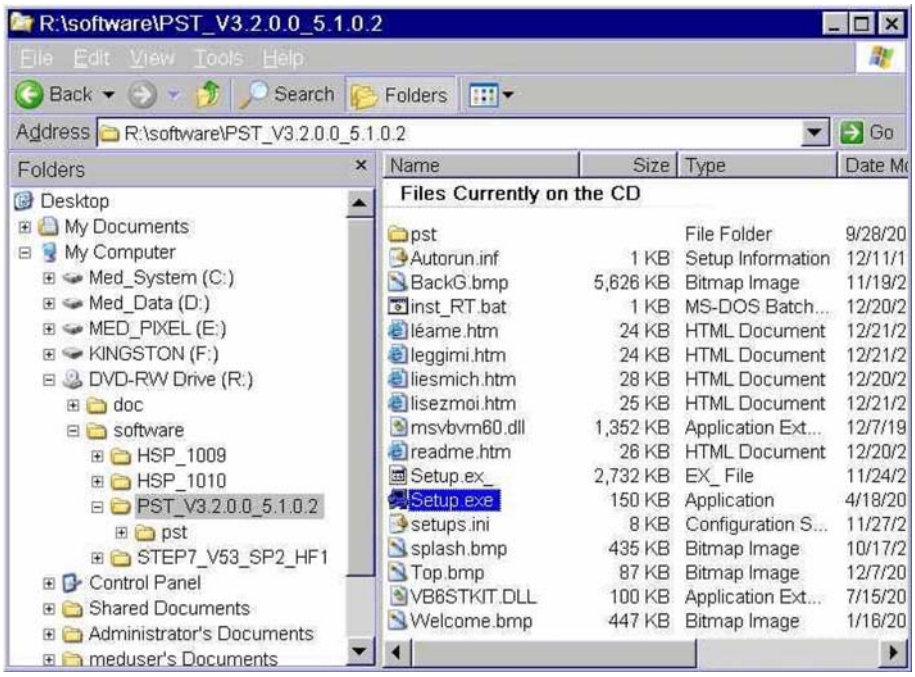

Fig. 18: WLAN Client, contents of the directory R:\software\PST-Tool_V3.2.0.0_5.1.0.2

- Start the <setup.exe> program by double-clicking on the icon.

  ➪ The Language selection window is displayed.

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NOTE	**The pre-defined installation language "English" can be selected.**

Fig. 19: WLAN Client, Language selection PST Tool

- Select English as the "Setup language".
- Click on the <Next> button.

  ➪ The "User information" window is displayed.

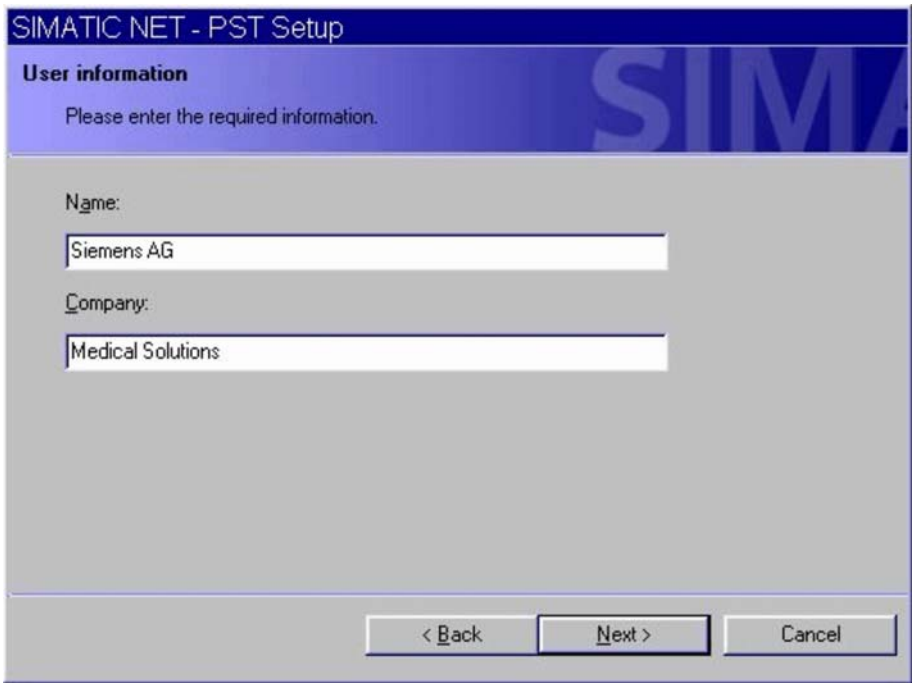

Fig. 20: WLAN Client, PST Tool, "User Information" window

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- Do not make any changes and click on the <Next> button.
  ➪ The "Programs" window is displayed.

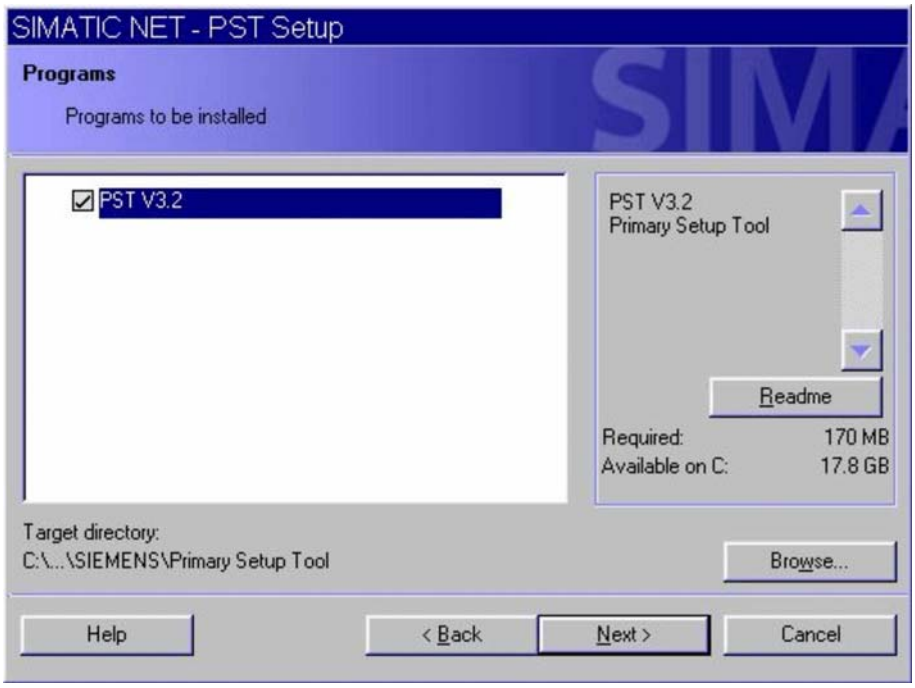

Fig. 21: WLAN Client, PST Tool, "Programs" window

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- The PST V3.2 software must be selected (checkmark set). Then click on <Next>.
  - ➪ Installation of the PST Tool is started. Here, several Installation windows are displayed temporarily.
  - ➪ If a "Choose Destination Location" request is displayed, leave the default installation directory and click on the <Next> button.

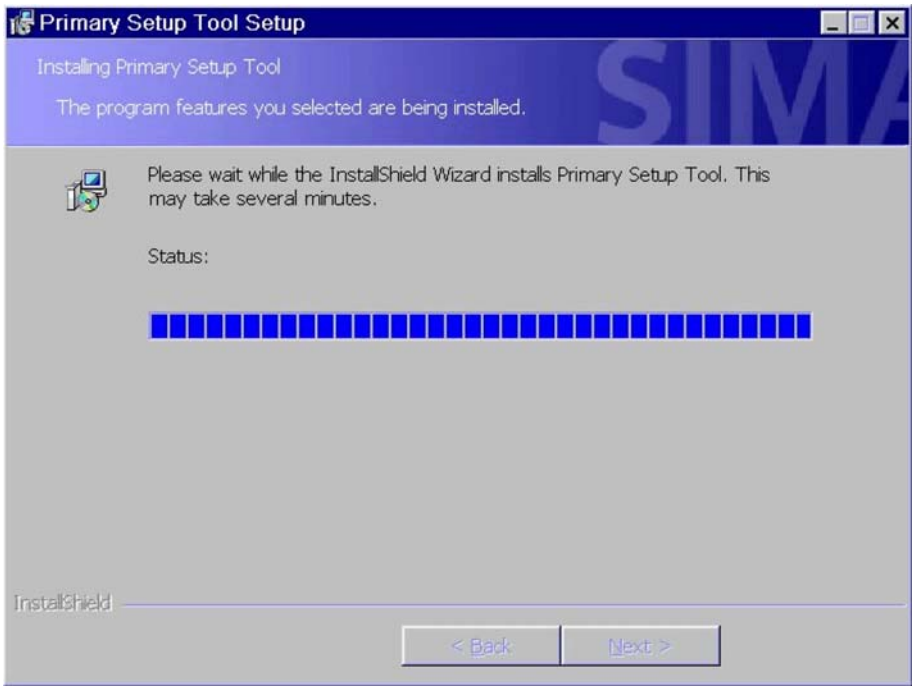
Primary Setup Tool Setup
Installing Primary Setup Tool
The program features you selected are being installed.
Please wait while the InstallShield Wizard installs Primary Setup Tool. This may take several minutes.
Status:
InstallShield
< Back
Next >

Fig. 22: WLAN Client, PST Tool, start of installation

- ➪ Close any additional requests or message windows by clicking on the <OK> button.
- ➪ After successful installation, the text “Setup has successfully installed and configured the software on your computer.” appears.

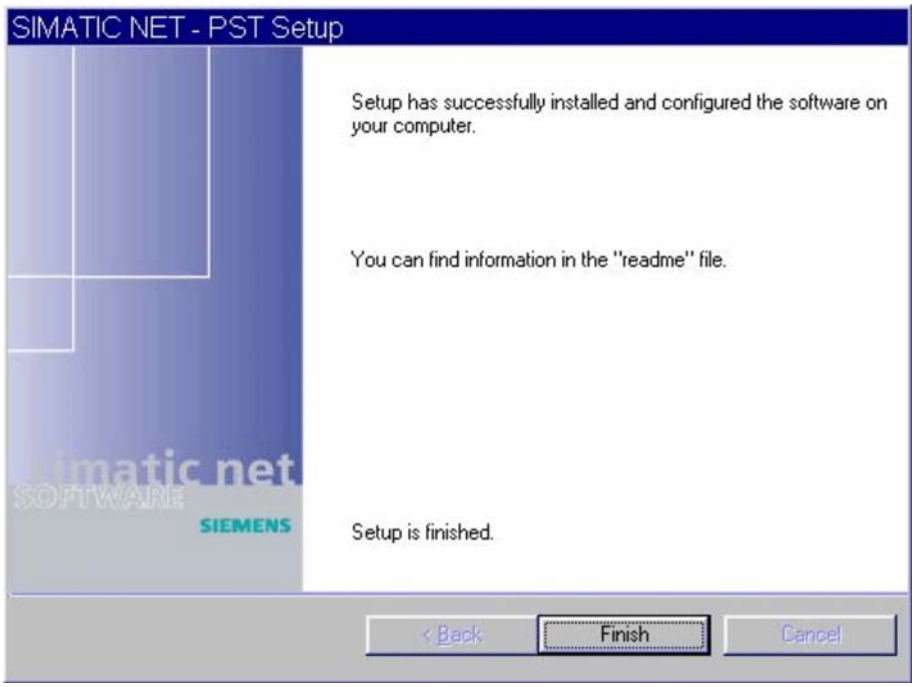
SIMATIC NET - PST Setup
Setup has successfully installed and configured the software on your computer.
You can find information in the "readme" file.
Setup is finished.
< Back
Finish
Cancel

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Fig. 23: WLAN Client, PST Tool, installation finished

- Click on <Finish>.

  ➪ Installation of the Primary Setup Tool is finished.

Installation of the DLC Protocol

- Select the <Start> - <Properties> menu and start the <Control Panel> program with a double-click.

  ➪ The Control Panel is displayed.

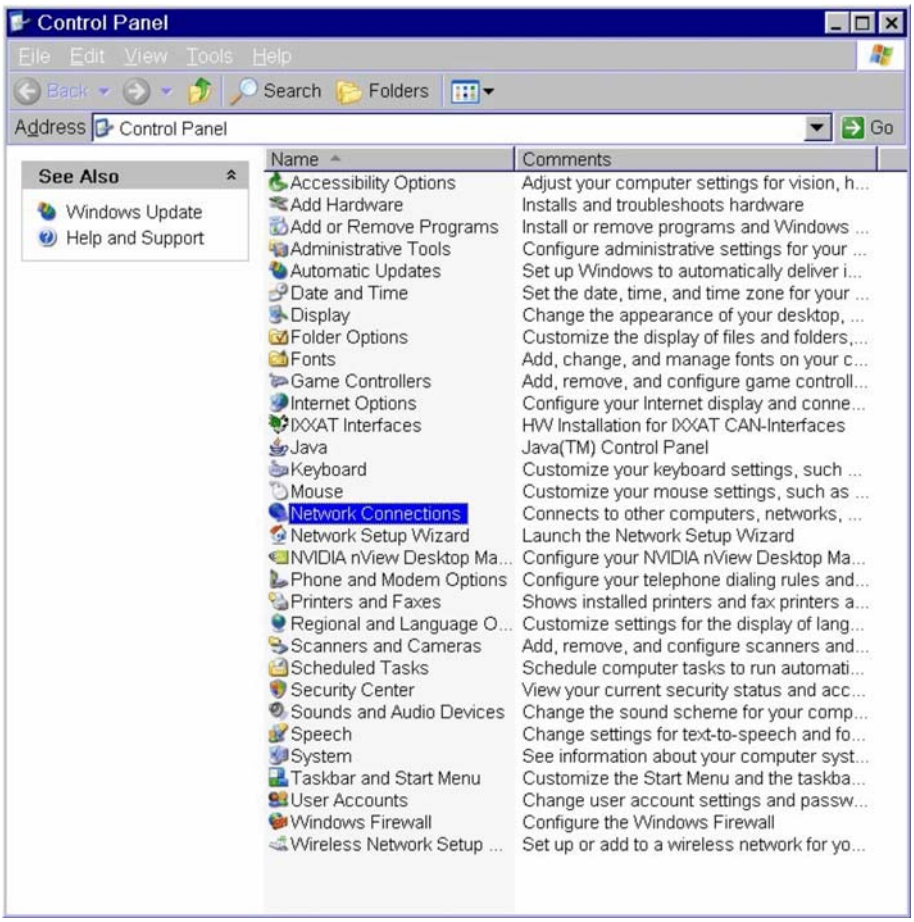
Control Panel
File Edit View Tools Help
Back Search Folders
Address Control Panel
Go
See Also
Windows Update
Help and Support
Name
Comments
Accessibility Options
Adjust your computer settings for vision, h...
Add Hardware
Installs and troubleshoots hardware
Add or Remove Programs
Install or remove programs and Windows ...
Administrative Tools
Configure administrative settings for your ...
Automatic Updates
Set up Windows to automatically deliver i...
Date and Time
Set the date, time, and time zone for your ...
Display
Change the appearance of your desktop, ...
Folder Options
Customize the display of files and folders,...
Fonts
Add, change, and manage fonts on your c...
Game Controllers
Add, remove, and configure game controll...
Internet Options
Configure your Internet display and conne...
IXXAT Interfaces
HW Installation for IXXAT CAN-Interfaces
Java
Java(TM) Control Panel
Keyboard
Customize your keyboard settings, such ...
Mouse
Customize your mouse settings, such as ...
Network Connections
Connects to other computers, networks, ...
Network Setup Wizard
Launch the Network Setup Wizard
NVIDIA nView Desktop Ma...
Configure your NVIDIA nView Desktop Ma...
Phone and Modem Options
Configure your telephone dialing rules and...
Printers and Faxes
Shows installed printers and fax printers a...
Regional and Language O...
Customize settings for the display of lang...
Scanners and Cameras
Add, remove, and configure scanners and...
Scheduled Tasks
Schedule computer tasks to run automati...
Security Center
View your current security status and acc...
Sounds and Audio Devices
Change the sound scheme for your comp...
Speech
Change settings for text-to-speech and fo...
System
See information about your computer syst...
Taskbar and Start Menu
Customize the Start Menu and the taskba...
User Accounts
Change user account settings and passw...
Windows Firewall
Configure the Windows Firewall
Wireless Network Setup ...
Set up or add to a wireless network for yo...

Fig. 24: Windows Control Panel

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- Open <Network Connections> with a double-click.
  ➪ The <Network Connection> window is displayed.

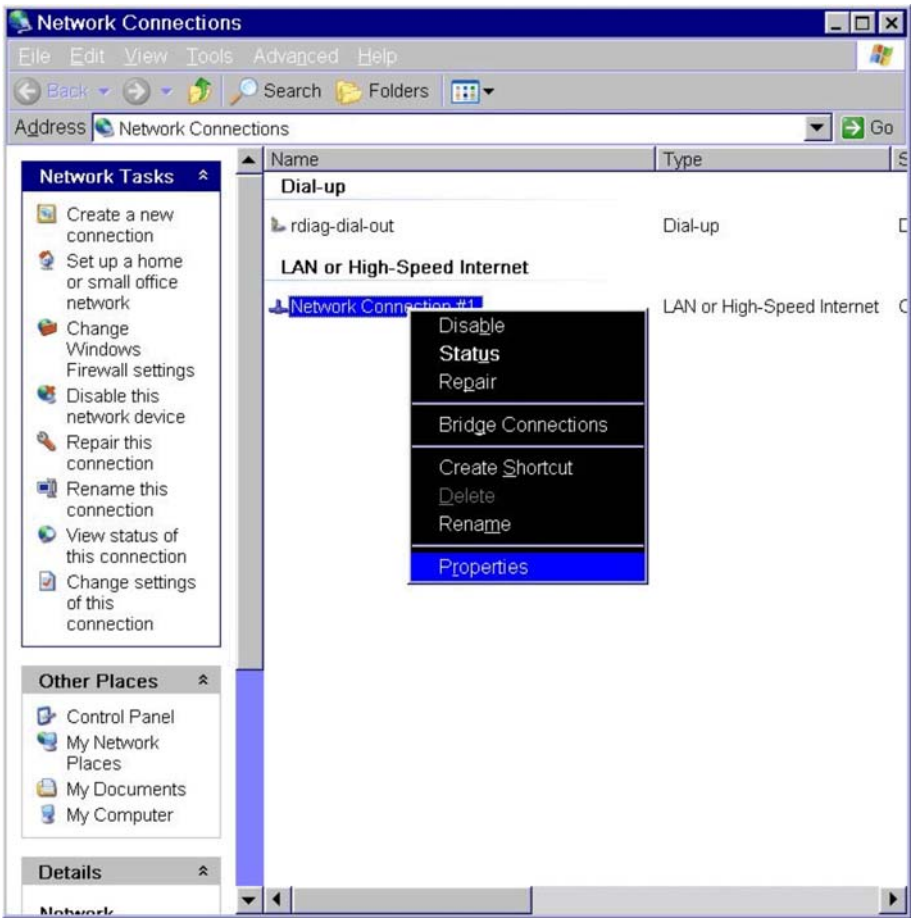

Fig. 25: Windows Network Connections, opening the "Properties" window

- Right-click on <Network Connections #1>.
  ➪ The submenu window is displayed.
- In the submenu, select <Properties> and left-click on it.
  ➪ The "Network Connection #1 Properties" window is opened.

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NOTE	The name of the network connection that is set up can vary.

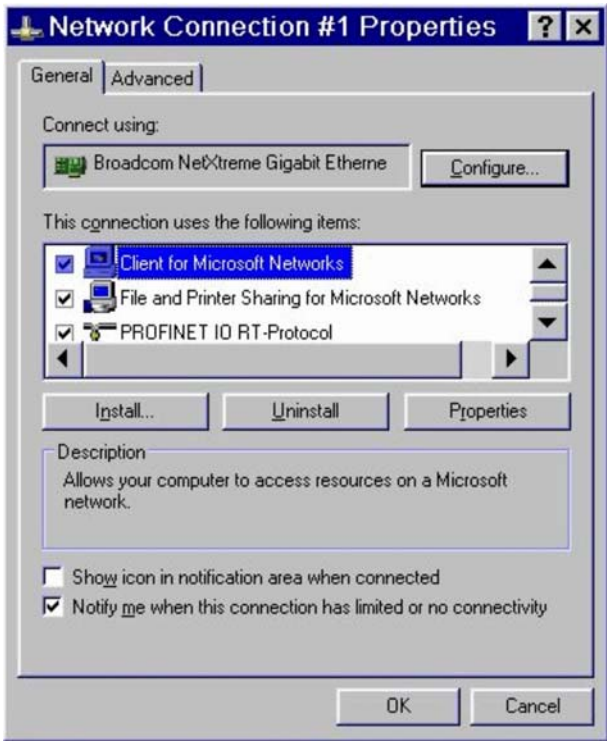

Fig. 26: Network Connection Properties

- Click on <Install...>.

  ➪ The "Select Network Component Type" window is displayed.

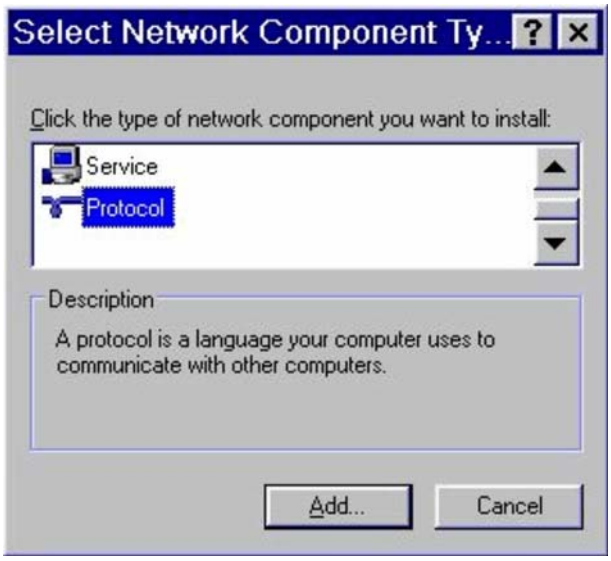
Select Network Component Ty...
Click the type of network component you want to install:
Service
Protocol
Description
A protocol is a language your computer uses to communicate with other computers.
Add...
Cancel

Fig. 27: Selection of the network component type

- Click on the "Protocol" icon.

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- Then click on the <Add...> button.
  ➪ The "Select Network Protocol" window is displayed.

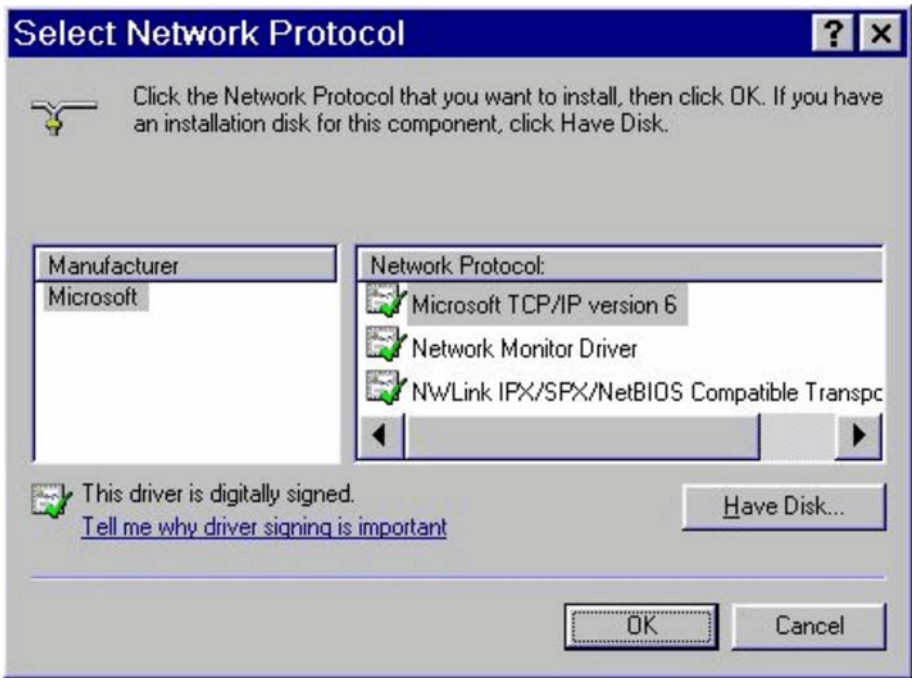
Select Network Protocol
Click the Network Protocol that you want to install, then click OK. If you have an installation disk for this component, click Have Disk.
Manufacturer
Microsoft
Network Protocol:
Microsoft TCP/IP version 6
Network Monitor Driver
NWLink IPX/SPX/NetBIOS Compatible Transpc
This driver is digitally signed.
Tell me why driver signing is important
Have Disk...
OK
Cancel

Fig. 28: Select Network Protocol

- Click on the <Have Disk...> button.
  ➪ The "Install from Disk" window is opened.

Fig. 29: Install from Disk

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- Click on the <Browse> button.
  - ➪ The "Locate File" window is opened.

Fig. 30: File selection window

- Switch to the window for the directory <Med_System (C:)> - <Program files> - <Siemens> - <Primary Setup Tool> - <DLC Protocol>.
- Select the "NETDLC.INF" file in the opened <DLC Protocol> directory.
- Then click on the "Open" button.
  - ➪ The path and file name are accepted into the previously opened "Install from Disk" window.

Install From Disk
Insert the manufacturer's installation disk, and then make sure that the correct drive is selected below.
OK
Cancel
Copy manufacturer's files from:
C:\Program Files\Siemens\Primary Setup Tool\DL
Browse...

Fig. 31: Install from Disk with correct path and file name

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- Click on the <OK> button.
  - ➪ The DLC protocol is displayed in the previously opened "Select Network Protocol" window.

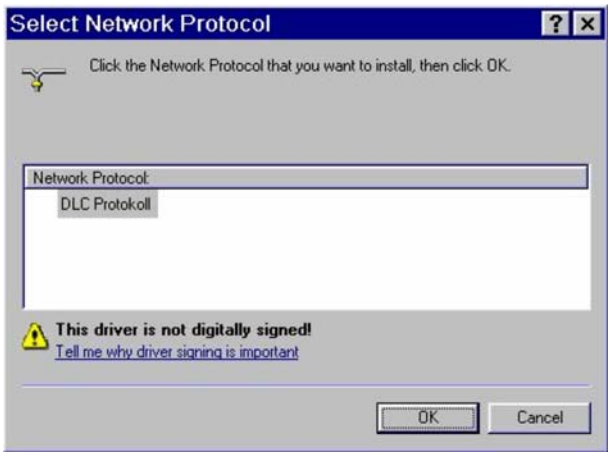
Select Network Protocol
Click the Network Protocol that you want to install, then click OK.
Network Protocol:
DLC Protokoll
This driver is not digitally signed!
Tell me why driver signing is important
OK
Cancel

Fig. 32: Select Network Protocol with DLC protocol icons

- Select the DLC Protocol. Then click on the <OK> button.
  - ➪ The DLC Protocol is installed.

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NOTE

For the query about whether or not digitalized drivers are to be installed, still install the driver.

Ignore any other warning messages and close the messages.

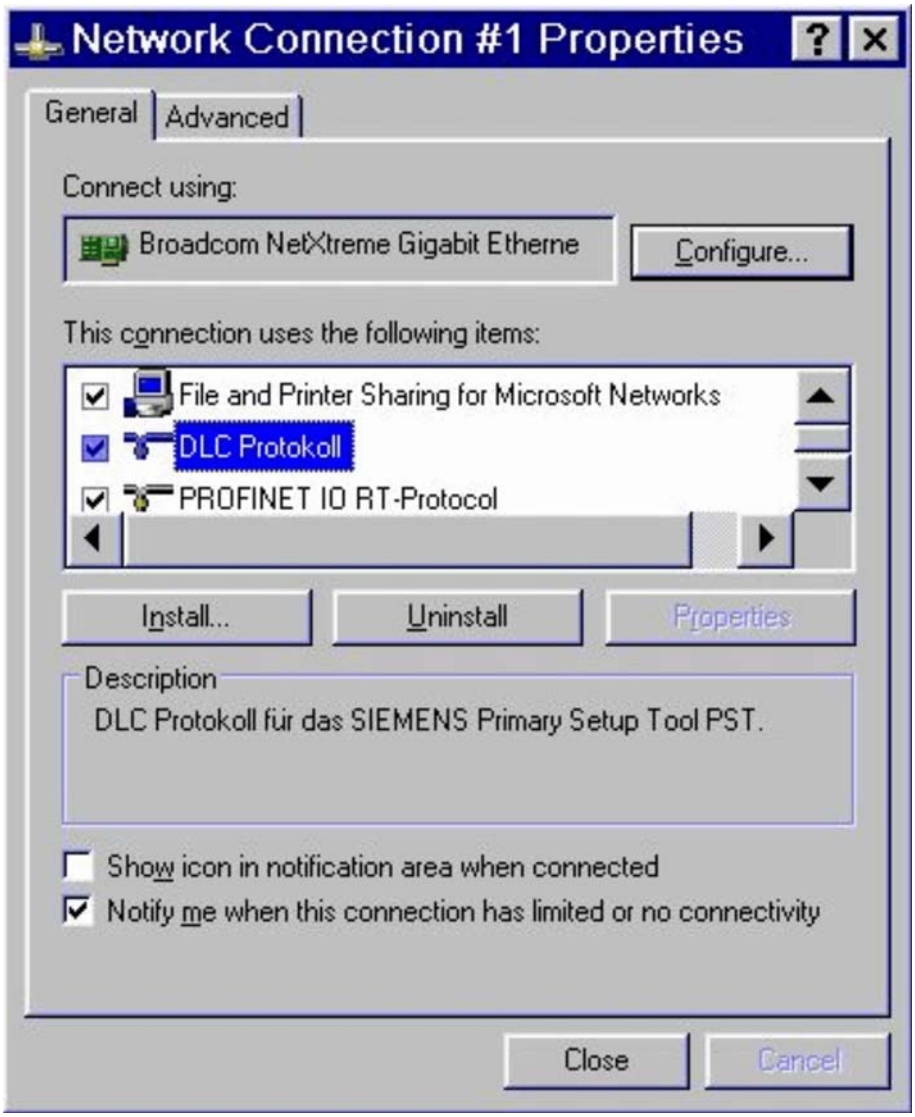

Fig. 33: Installed DLC protocol icons

- Close the "Network Connection..." window by clicking the <Close> button.

  ➪ Installation of the DLC Protocol is finished.

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Configuration with the Primary Setup Tool

NOTE

The network connection (network cables) between the image system PC - network switch and the WLAN Client - network switch must be present.

A network connection to the hospital network may NOT exist. Unplug any network cable at the monitor carriage.

- In Windows Explorer, switch to the directory <Med_System (C:)> - <Program Files> - <Siemens> - <Primary Setup Tool>.

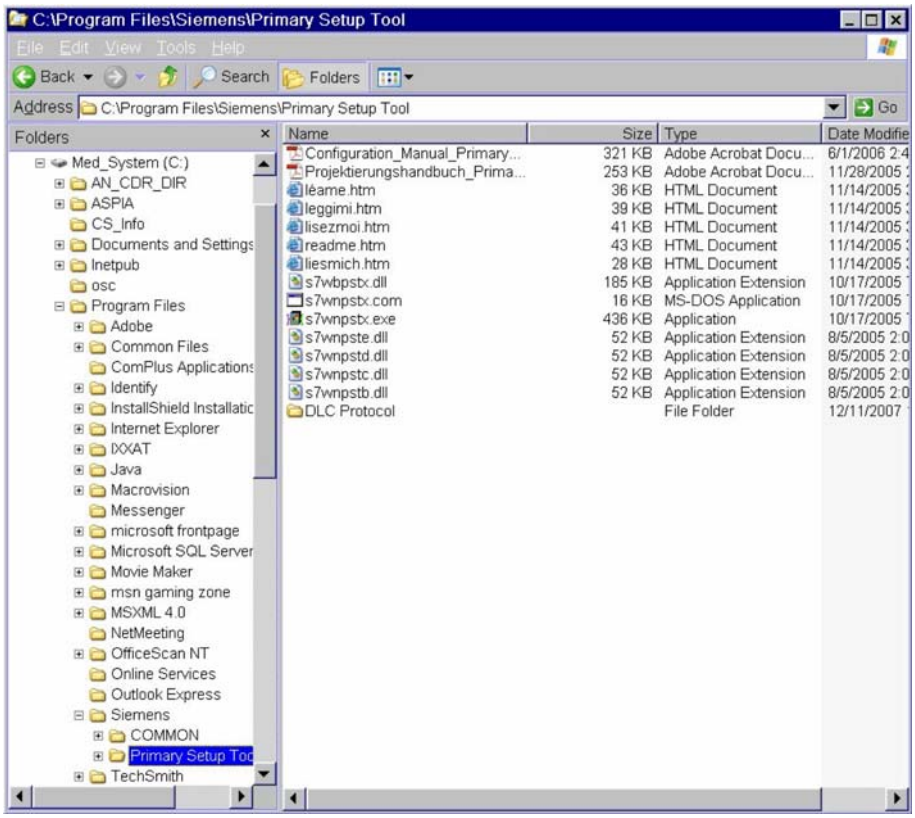

Fig. 34: Directory C.\Program Files\Siemens\Primary Setup Tool

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- Start the "s7wnpstx.exe" program by double-clicking on the icon.
  ➪ The Language selection window for the program is displayed.

Fig. 35: Language selection PST Tool

- Select the desired language.
  ➪ The main window of the Primary Setup Tool is displayed.

NOTE **The following illustrations were generated after selecting English.**

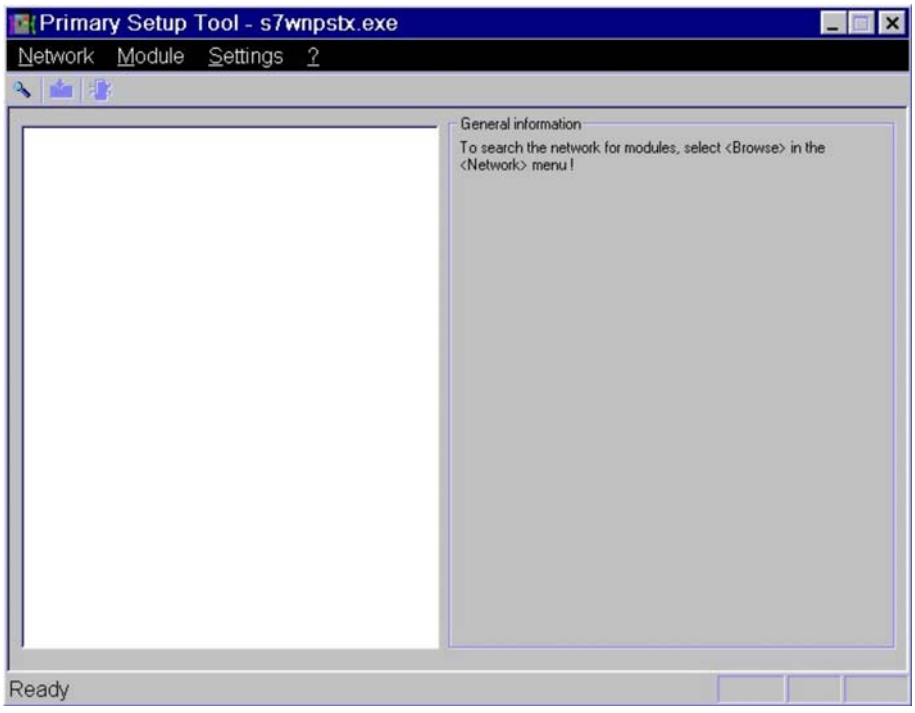

Fig. 36: Primary Setup Tool, main window

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- Select the <Settings> - <Network Adapter> menu.

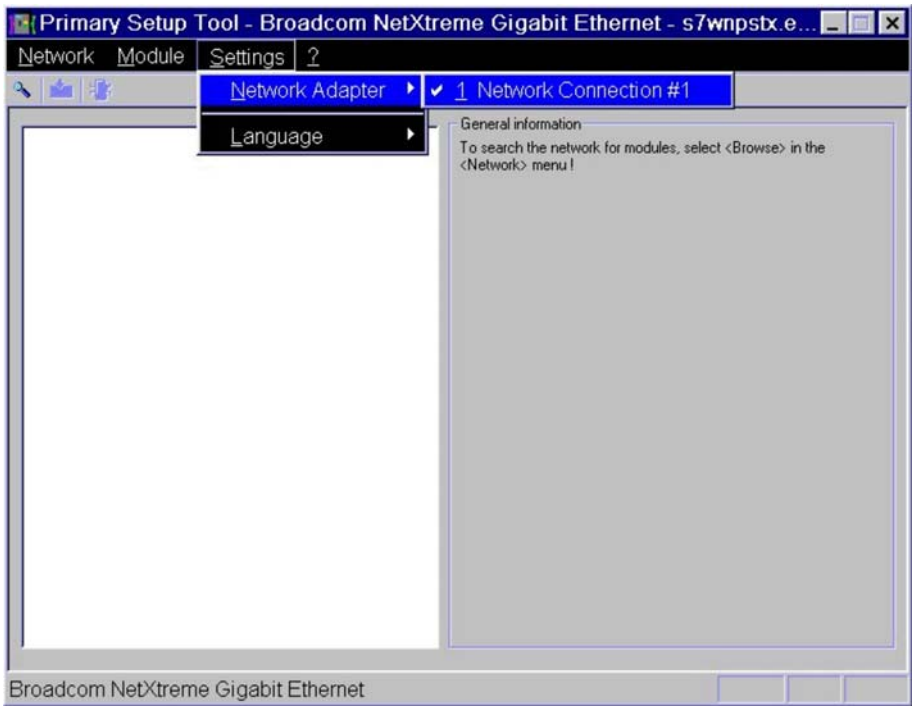

Fig. 37: Selection of the network adapter

➪ The network connection for the image system PC detected by the Primary Setup Tool is displayed.

- Select the network connection for the image system PC.

➪ Following selection, this is identified with a checkmark.

- Click on the <Network> - <Browse> menu.

➪ The Primary Setup Tool looks for the network connection to the WLAN Client (via the network switch - Ethernet connection).

Fig. 38: Network Browse message

- Following a successful search for the network connection to the WLAN Client:

➪ INC : XX-XX-XX-XX-XX-XX : YYY.YYY.YYY.YYY is displayed.

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NOTE

XX-XX-XX-XX-XX-XX corresponds to the WLAN Client MAC address.

YYY.YYY.YYY.YYY corresponds to the current IP address of the WLAN Client.

The illustration shows in this instance 0.0.0.0 as the IP address, because an IP address has not yet been assigned.

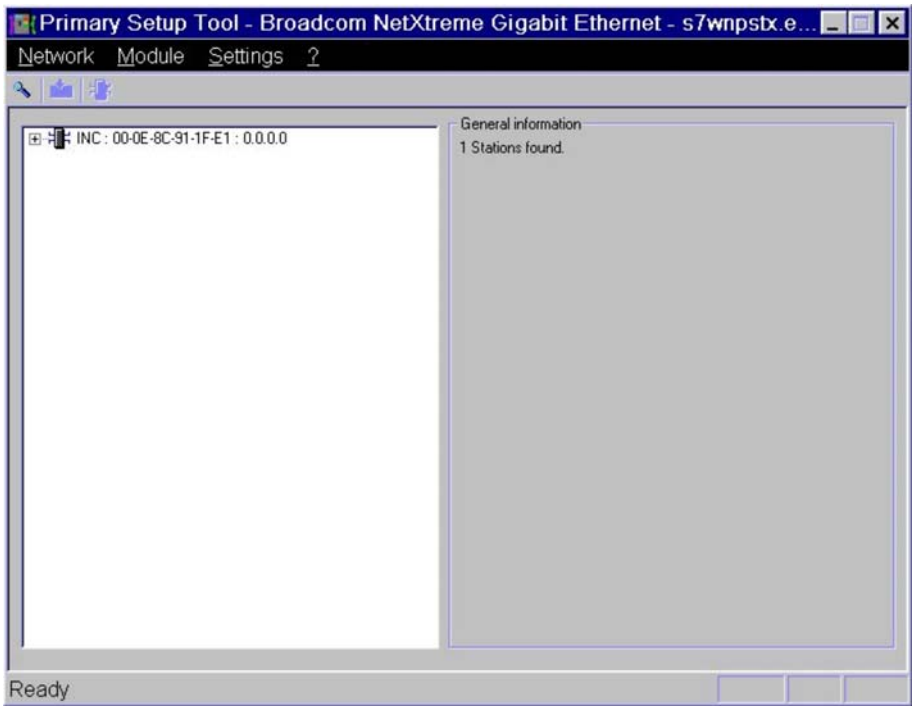

Fig. 39: PST display of the found network connection

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- Click on the + symbol to the left, next to the network that was found.
  ➪ The line "Ind. Ethernet Interface" appears.

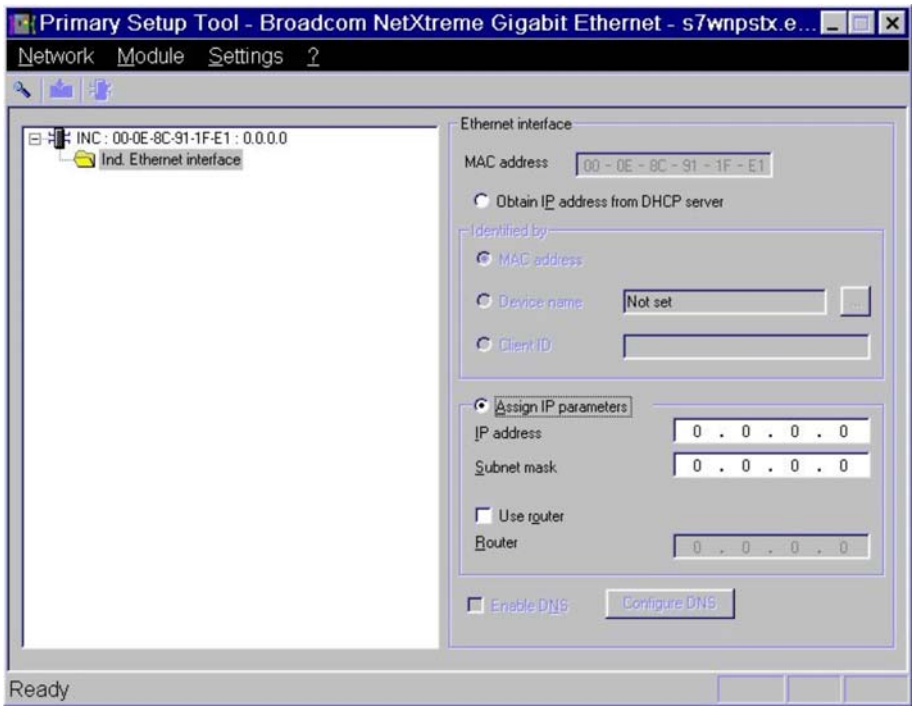

Fig. 40: WLAN Client network configuration

- Highlight the "Ind. Ethernet Interface" line by clicking on it.
  ➪ The Ethernet interface configurations for the WLAN Client are displayed.
- Click on “Assign IP parameters”.
- The IP address defined by the customer's network administrator and the Subnet mask for the WLAN Client must be entered.

NOTE

To administer the WLAN Client, a permanent IP address / Subnet mask must be assigned to it.

The image system PC and the WLAN Client must be operating in the same network segment.

- Click on the line "INC : XX-XX-XX-XX-XX-XX : YYY.YYY.YYY.YYY".
  ➪ The line is highlighted in color.

NOTE

XX-XX-XX-XX-XX-XX corresponds to the WLAN Client MAC address.

YYY.YYY.YYY.YYY corresponds to the current IP address of the WLAN Client.

If the line is not selected, the menus under "Module" cannot be selected.

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- In the Primary Setup Tool, click on the <Module> - <Download> menu.
  - ➪ The query "Do you want to continue downloading to the station?" is displayed.

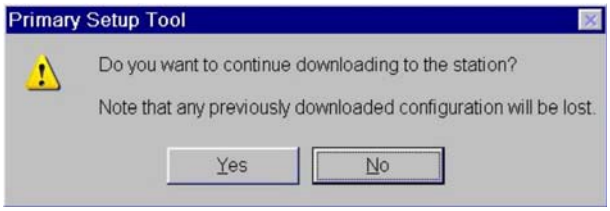
Primary Setup Tool
Do you want to continue downloading to the station?
Note that any previously downloaded configuration will be lost.
Yes
No

Fig. 41: Download query

- Click on the <Yes> button.
  - ➪ The configuration is transferred to the WLAN Client.
  - ➪ The configuration is automatically saved in the WLAN Client.
  - ➪ The WLAN Client is automatically restarted.
- Wait about 2-3 minutes until the WLAN Client has saved the transferred data and has rebooted.
- Click on the <Network> - <Browse> menu.
  - ➪ The new configuration is displayed in the screen.

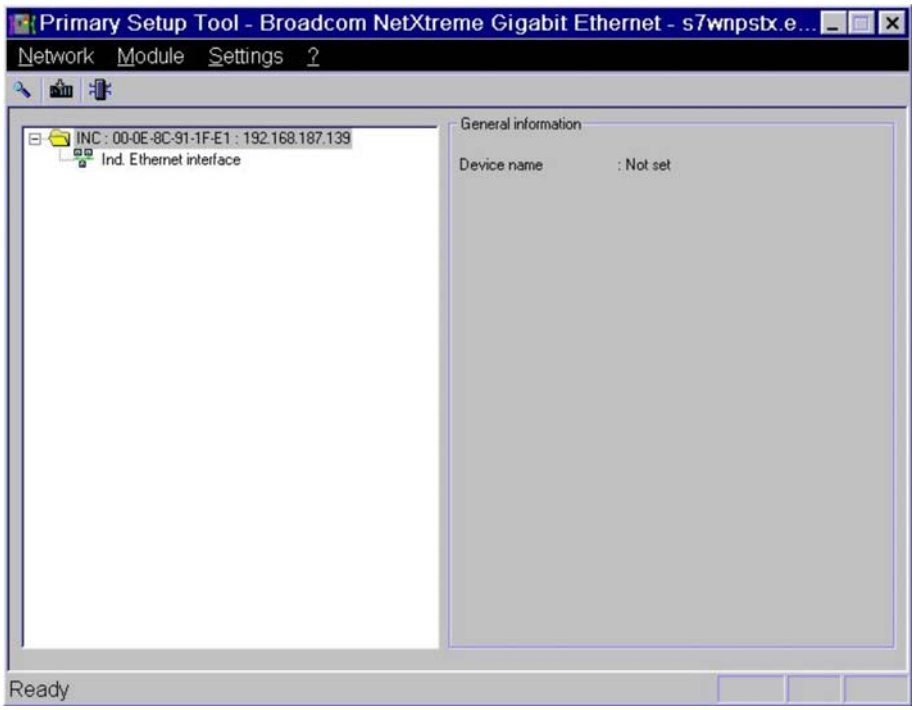
Primary Setup Tool - Broadcom NetXtreme Gigabit Ethernet - s7wnpstx.e...
Network Module Settings ?
INC : 00-0E-8C-91-1F-E1 : 192.168.187.139
Ind. Ethernet interface
General information
Device name : Not set
Ready

Fig. 42: Display of the WLAN Client MAC and IP address following the download

- Configuration of the WLAN Client with the Primary Setup Tool is finished.

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NOTE

If the IP address / Subnet mask for the WLAN Client needs to be changed during operation, this can be done by using the Primary Setup Tool.

The "DLC Protocol" and "PROFINET IO RTA Protocol" installed during installation of the PST Tool must also be activated, because they are deactivated again following assignment of the WLAN Client IP address and Subnet mask.

Deactivating Network Protocols no longer needed

NOTE

The "DLC Protocol" and "PROFINET IO RT Protocol" network protocols installed to perform the PST Tool do not need to be active for further operation.

If the IP address / Subnet mask for the WLAN Client needs to be changed during operation, this can be done by using the Primary Setup Tool. The deactivated "DLC Protocol" and "PROFINET IO RT Protocol" network protocols first must be activated again temporarily.

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- Select the <Start> - <Properties> menu and start the <Control Panel> program with a double-click.

  ➪ The Control Panel is displayed.

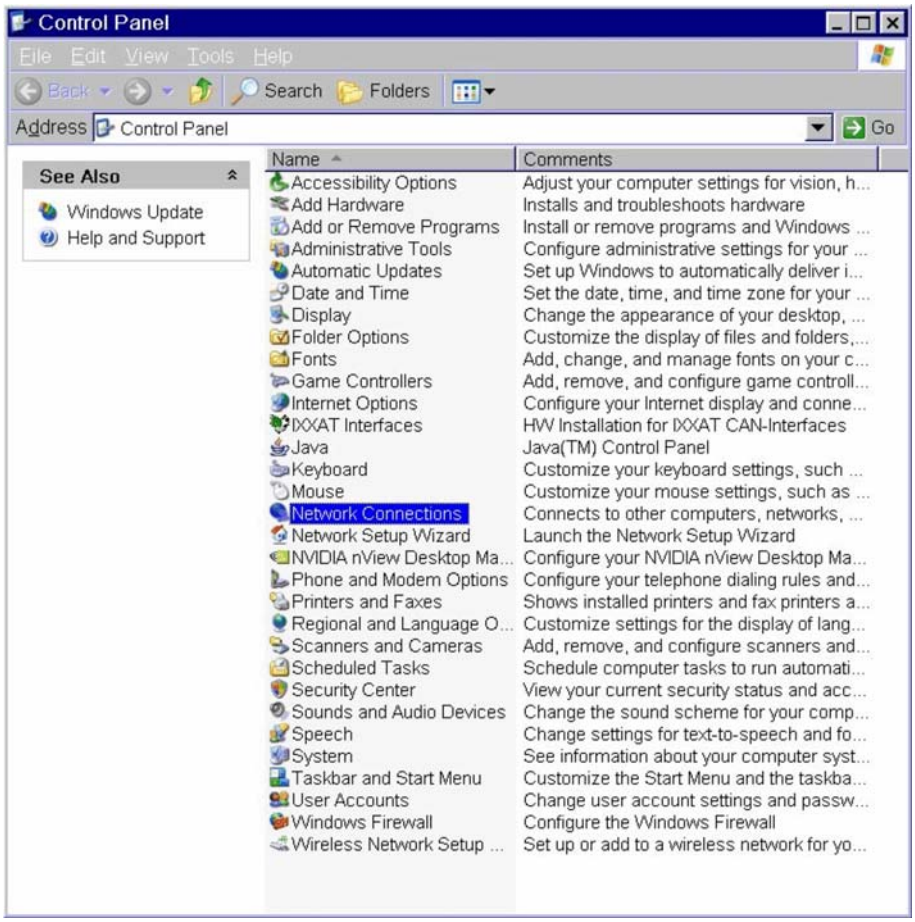
Control Panel
File Edit View Tools Help
Back Search Folders
Address Control Panel
Go
See Also
Windows Update
Help and Support
Name
Comments
Accessibility Options
Adjust your computer settings for vision, h...
Add Hardware
Installs and troubleshoots hardware
Add or Remove Programs
Install or remove programs and Windows ...
Administrative Tools
Configure administrative settings for your ...
Automatic Updates
Set up Windows to automatically deliver i...
Date and Time
Set the date, time, and time zone for your ...
Display
Change the appearance of your desktop, ...
Folder Options
Customize the display of files and folders,...
Fonts
Add, change, and manage fonts on your c...
Game Controllers
Add, remove, and configure game controll...
Internet Options
Configure your Internet display and conne...
IXXAT Interfaces
HW Installation for IXXAT CAN-Interfaces
Java
Java(TM) Control Panel
Keyboard
Customize your keyboard settings, such ...
Mouse
Customize your mouse settings, such as ...
Network Connections
Connects to other computers, networks, ...
Network Setup Wizard
Launch the Network Setup Wizard
NVIDIA nView Desktop Ma...
Configure your NVIDIA nView Desktop Ma...
Phone and Modem Options
Configure your telephone dialing rules and...
Printers and Faxes
Shows installed printers and fax printers a...
Regional and Language O...
Customize settings for the display of lang...
Scanners and Cameras
Add, remove, and configure scanners and...
Scheduled Tasks
Schedule computer tasks to run automati...
Security Center
View your current security status and acc...
Sounds and Audio Devices
Change the sound scheme for your comp...
Speech
Change settings for text-to-speech and fo...
System
See information about your computer syst...
Taskbar and Start Menu
Customize the Start Menu and the taskba...
User Accounts
Change user account settings and passw...
Windows Firewall
Configure the Windows Firewall
Wireless Network Setup ...
Set up or add to a wireless network for yo...

Fig. 43: Windows Control Panel

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- Open <Network Connections> with a double-click.
  ➪ The <Network Connection> window is displayed.

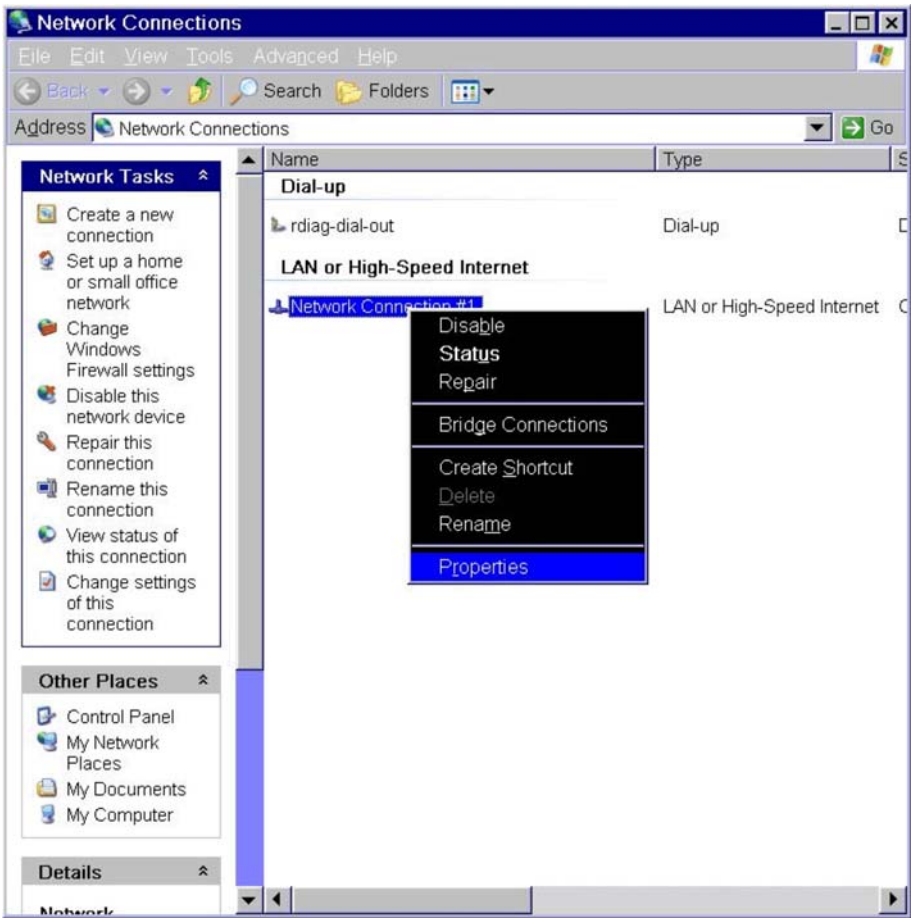

Fig. 44: Windows Network Connections, opening the "Properties" window

- Right-click on <Network Connections #1>.
  ➪ The submenu window is displayed.
- In the submenu, select <Properties> and left-click on it.
  ➪ The "Network Connection #1 Properties" window is opened.

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NOTE	The name of the network connection that is set up can vary.

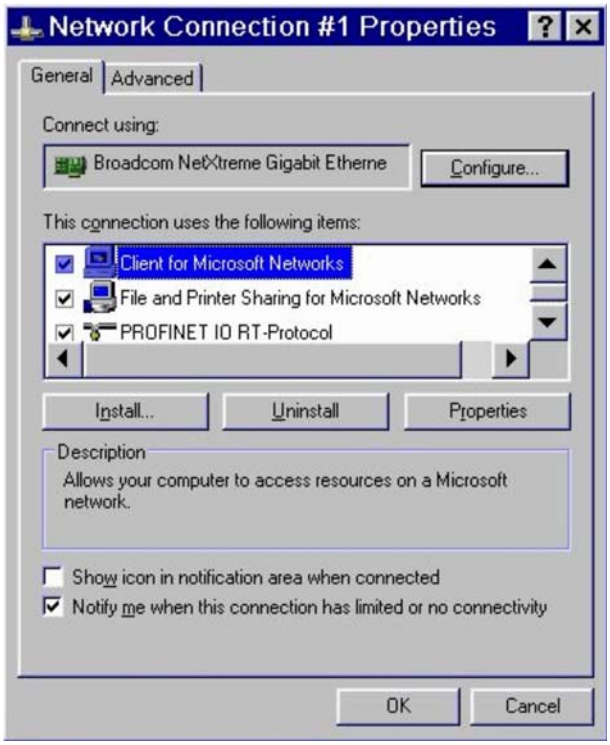

Fig. 45: Network Connection Properties

- Deactivate the "DCL Protocol" and the "PROFINET IO RT Protocol" by removing the checkmark in the checkboxes.

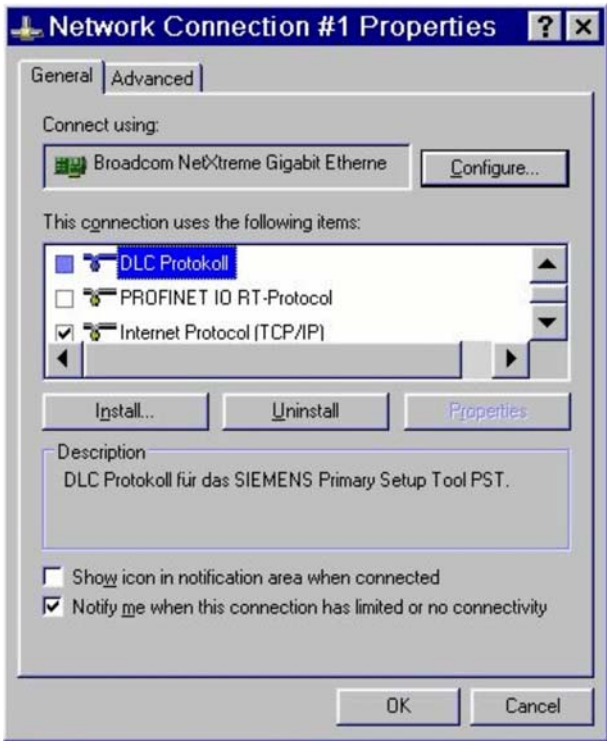

Fig. 46: Windows Network Connections, deactivating the protocols

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- Then click on the <OK> button.
  ➪ The two network protocols are deactivated.
- Also close the "Network Connection" and "Control Panel" windows.

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WEB-based Configuration of the WLAN Client

NOTE

The Basic Wizard and the Security Wizard are available for the intial configurtation of the WLAN Client. These will guide you through the initial configuration.

In addition, later changes to the configuration can be made very specifically by selecting and changing the particular menu items. Help for the individual menus can be selected by clicking on the <Help> button in the WEB interface for the WLAN Client.

Basic Configuration

NOTE

The image system PC is still in the Windows mode, the Syngo application is not started.

If the Syngo application was started again in the interim, log off as described in the section "Installation of the Primary Setup Tool", paragraph "As the "meduser" and log on as "administrator".

- Start the Internet Explorer on the ARCADIS system image system PC.
- In Internet Explorer, in the "Address:" line, enter the IP address of the WLAN Client.
  - ➪ Input format: **“http://192.168.187.139**”

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NOTE	**The IP address used as an example, 192.168.187.139, should be replaced by the previously programmed IP address.**

➪ The SIMATIC NET "Authorization" window is displayed.

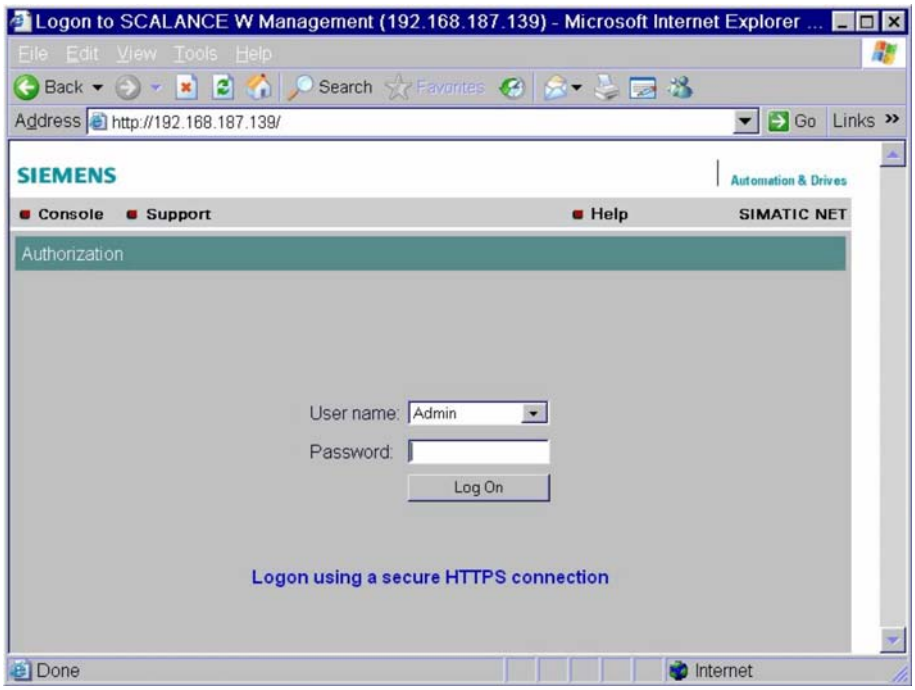

Fig. 47: WLAN Client, integrated HTTP server, Start window

- During initial startup, enter **Admin** as the name in the "User name" line.
- During initial startup, enter the WLAN Client password listed in the Knowledge Base, SP Password List, in the "Password" line.
- Click on the <Log On> button.

NOTE	**If the customer's network administrator requests a change of the administrator name (user name) and the administrator password (password), this can be changed during the Security configuration.**

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- Conclude the following security question “ When you send information to the Internet, it might be possible for others to see that information. Do you want to continue?” by clicking on the “Yes” button.

  ➪ The SIMATIC NET "Ethernet Client Module" window is displayed.

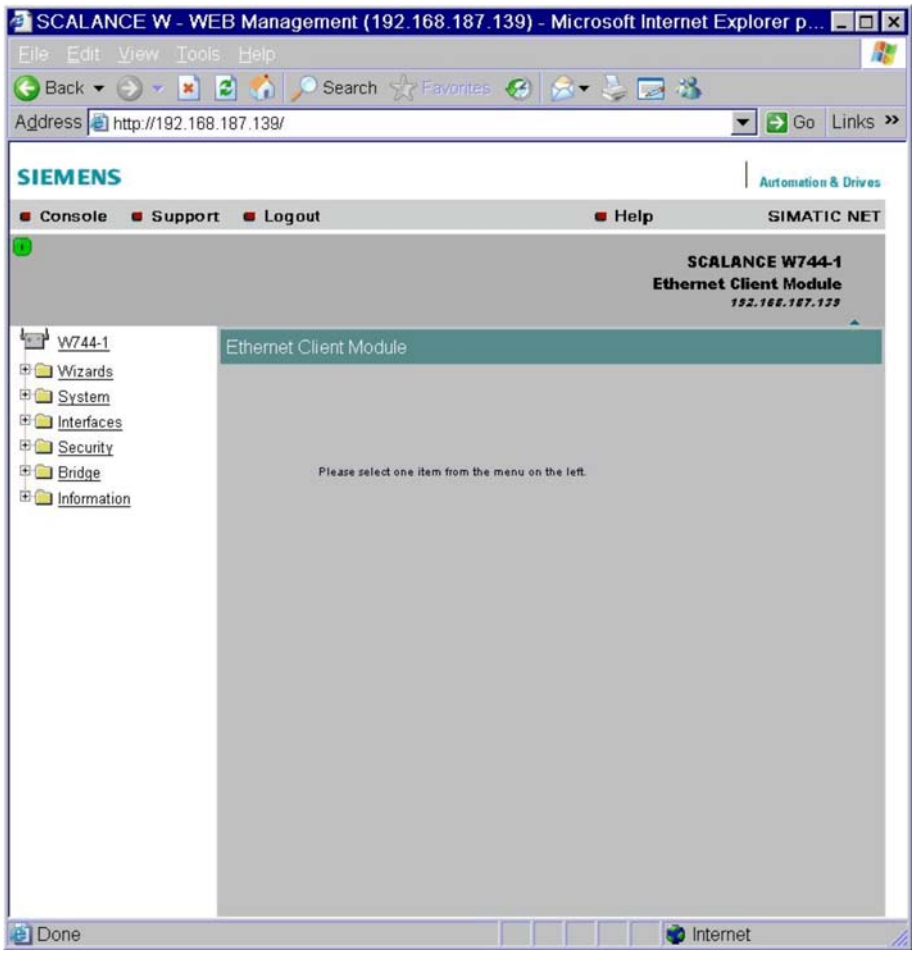

Fig. 48: WLAN Client, "Ethernet Client Module" HTTPS page

NOTE	**Opening the sub-menu for the first time can take up to 60 seconds.**

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- Click on the <Wizards> menu and the <Basic> sub-menu.
  ➪ The SIMATIC NET "IP Settings" window is displayed.

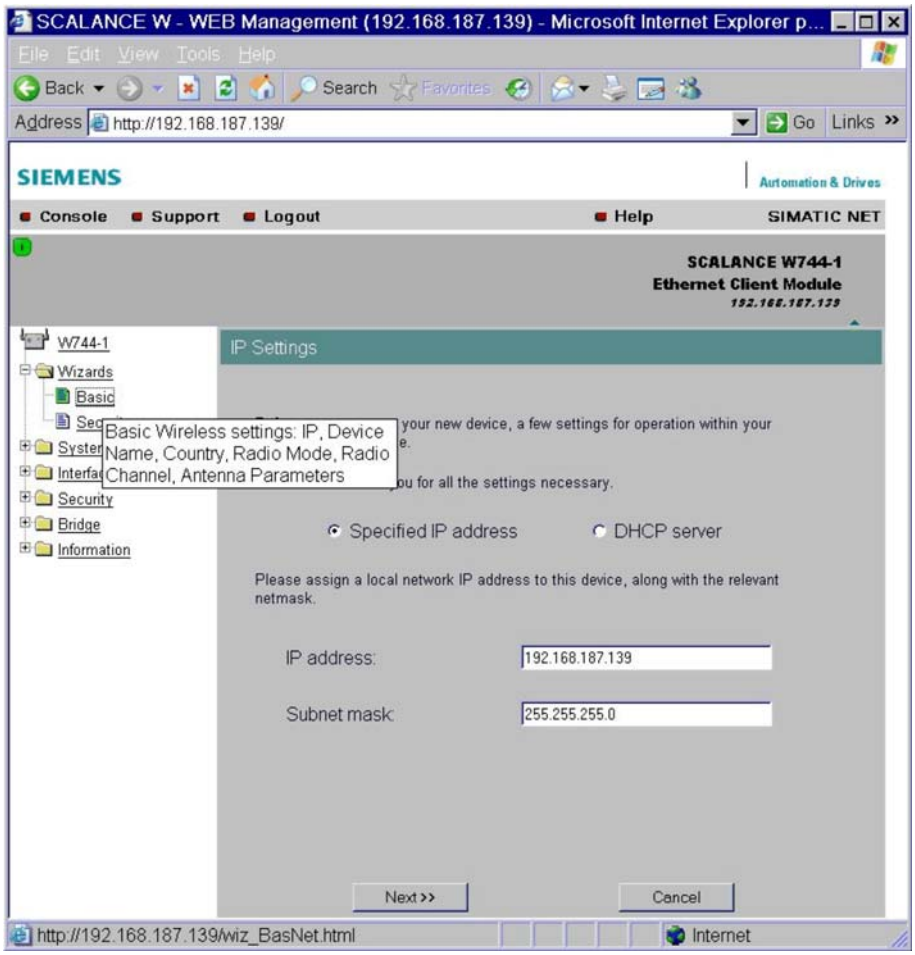

Fig. 49: WLAN Client, "IP Settings" HTTPS page

- The specified IP address and Subnet mask are displayed in the window.

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- Click on the <Next>>> button.
  - ➪ The SIMATIC NET "System Name" window is displayed.

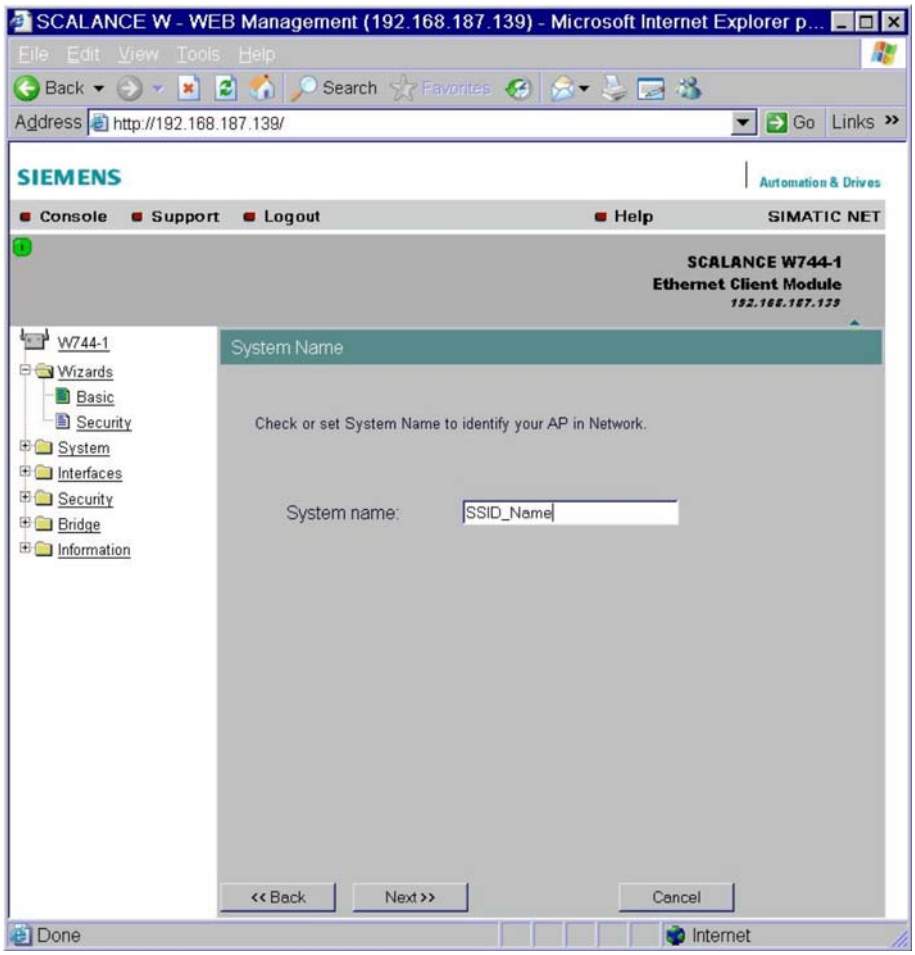

Fig. 50: WLAN Client, "System Name" HTTPS page

- A name can be assigned to the WLAN Client in the "System Name" text box. The parameter corresponds to the SNMP "sysName" parameter.

NOTE

The name may be a max. of 255 characters long.

If this parameter also is to used for WDS or redundancy, the maximum length is 30 characters.

Definition of the system name is made by the customer's network administrator.

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- Click on the <Next>>> button.

  ➪ The SIMATIC NET "Country Code" window is displayed.

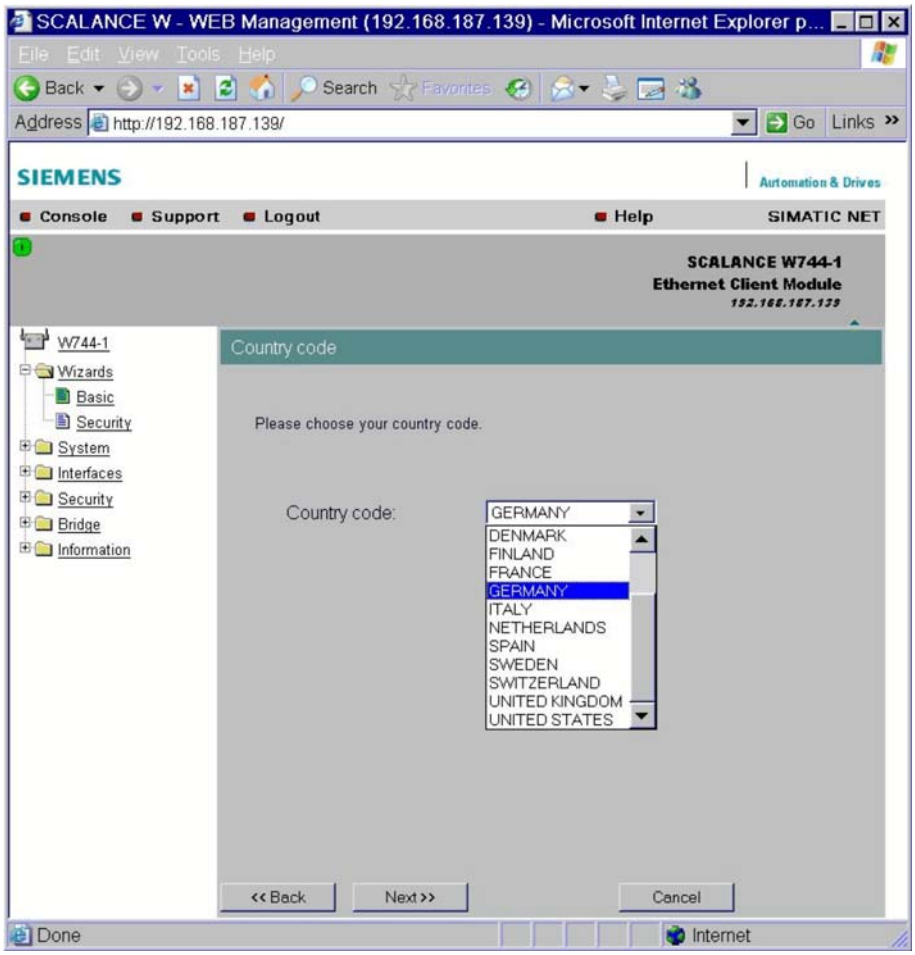

Fig. 51: WLAN Client, "Country Code" HTTPS page

- Select your country in the "Country Code" list box.

NOTE

Correct setting of the country is absolutely necessary for operation that meets acceptance guidelines!

Selection of a country that differs from the user country can be subject to legal charges!

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- Click on the <Next>>> button.

  ➪ The SIMATIC NET "Wireless Settings" window is displayed.

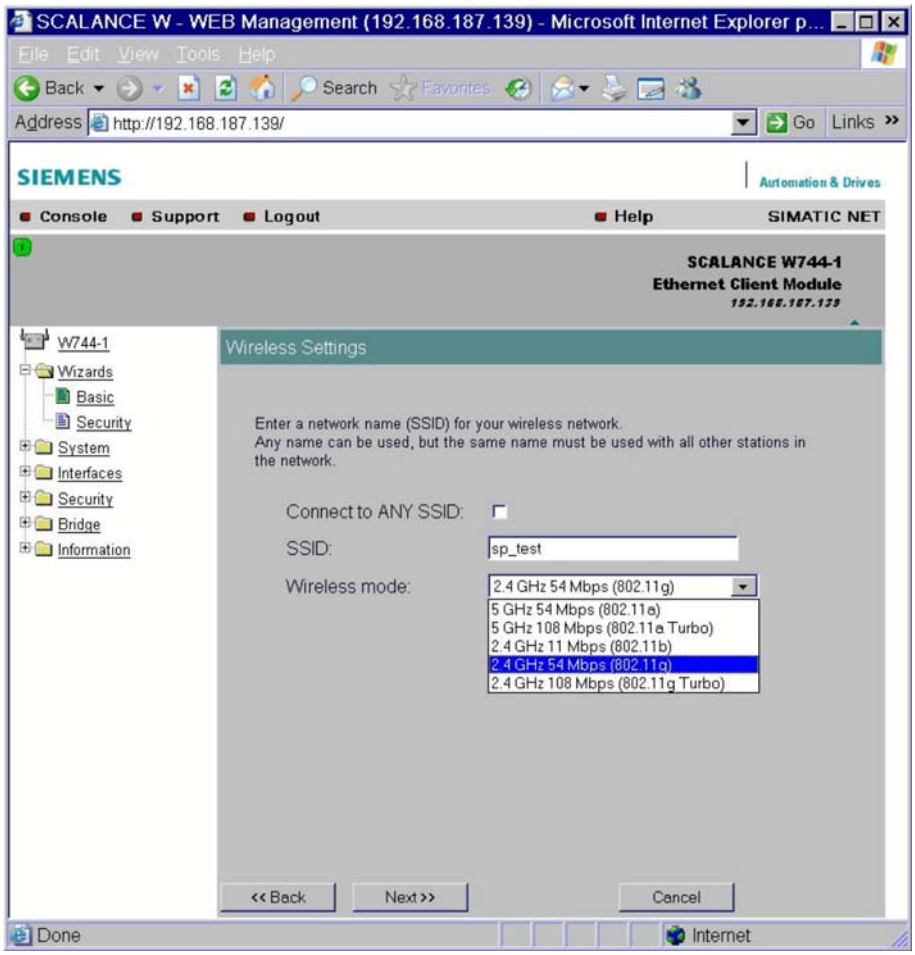

Fig. 52: WLAN Client, "Wireless Settings" with List box HTTPS page

- Set the "Connect to ANY SSID" option box per the definition of the customer's network administrator or leave it open.

NOTE	**Set Option box: The WLAN Client connects to the access point that permits the best possible data transfer and to which a connection is allowed based on the security settings.**

- Enter the SSID per the definition of the customer's network administrator in the "SSID" text box.

NOTE	**The maximum length of the SSID is 32 characters. The % symbol is not allowed. For compatibility reasons, no country-specific characters such as the umlauts ö, ä, ü, ß, etc. should be used.**

- Select the particular operation mode per the definition of the customer's network administrator in the "Wireless mode" list box.

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NOTE

Use of the wireless mode is usually required by the infrastructure that is already established. With a free selection, the use of the 5GHz / 54Mbps (802.11a) network is recommended, because signal networks in the 2.4GHz range are used by other signal services.

- Click on the <Next>>> button.
  - ➪ The SIMATIC NET "Adopt MAC Address Settings" window is opened.

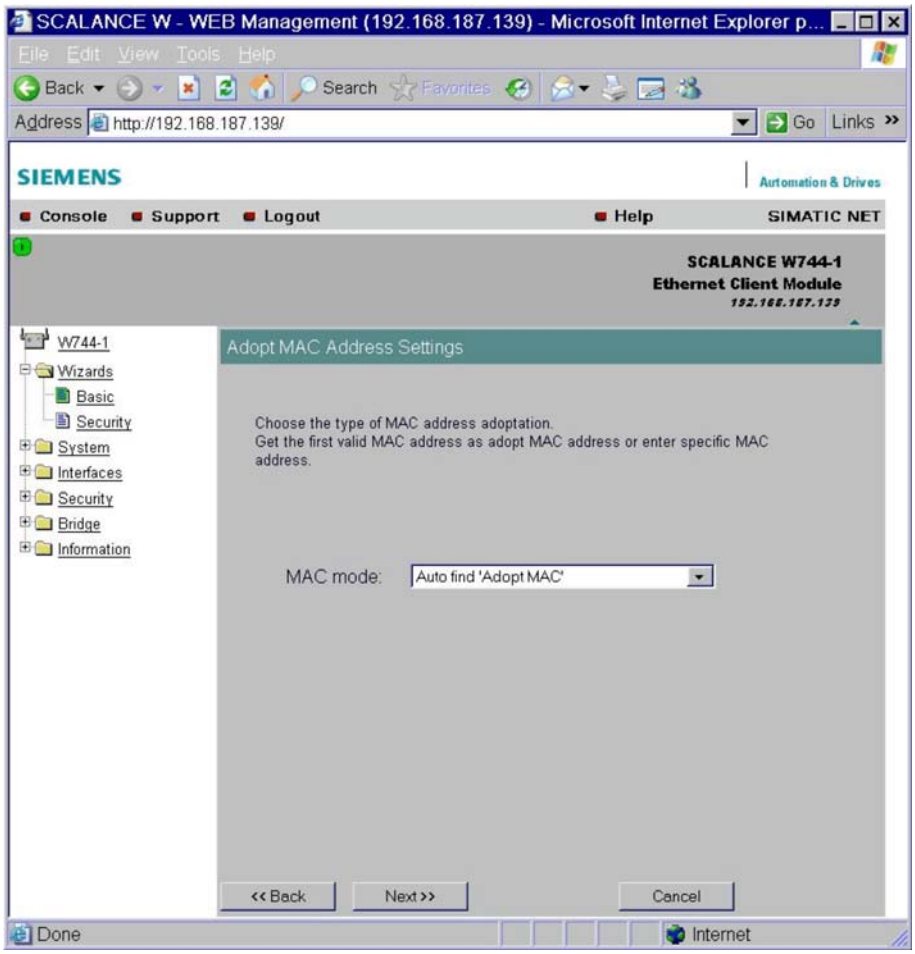

Fig. 53: WLAN Client, "Adopt MAC Address Settings" HTTPS page

- Select the desired MAC mode per the definition of the customer's network administrator in the "MAC mode" list box.

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NOTE

Normally, the "Auto find 'AdoptMac" MAC mode can be selected. The WLAN Client automatically accepts the source MAC address of the first telegram that the WLAN Client receives over the Ethernet interface.

On request from the network administrator, a permanent MAC address (=MAC address of the network adapter image system computer) can be entered. To do this, select "Set 'AdoptMAC' manually" and then enter the MAC address of the network adapter.

- Click on the <Next>>> button.

  ➪ The SIMATIC NET "Channel Settings" window is displayed.

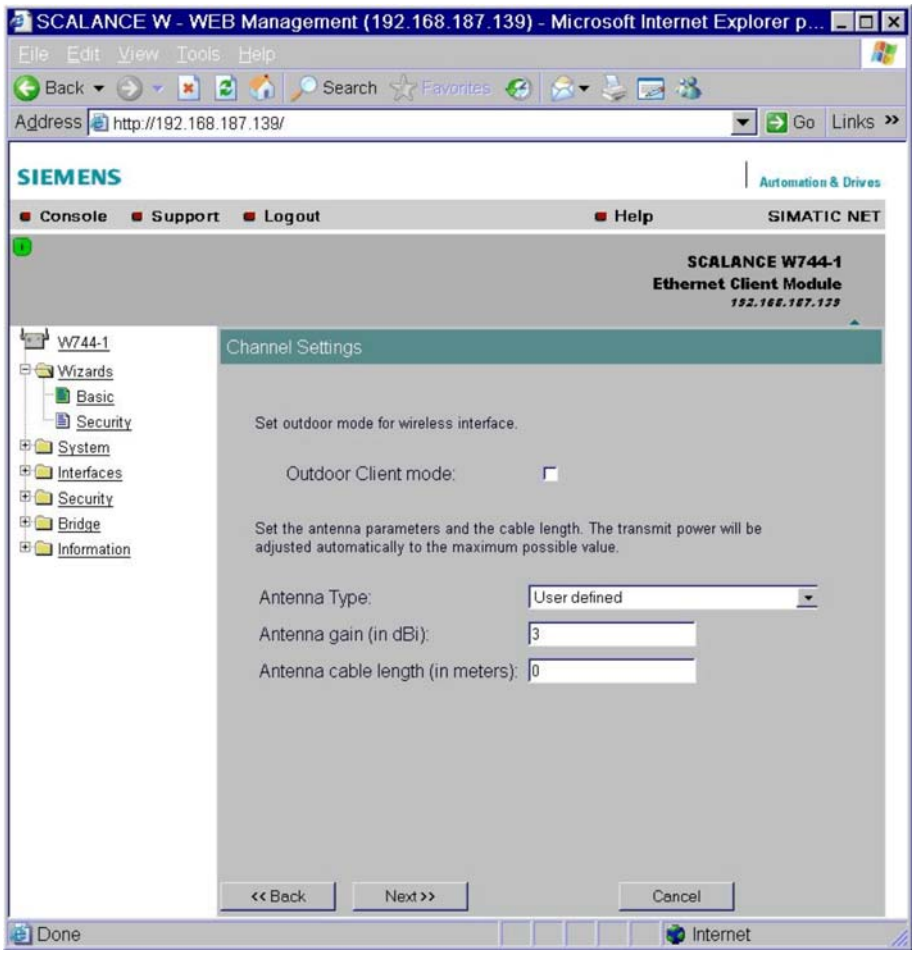

Fig. 54: WLAN Client, "Channel Settings" HTTPS page

- Normally, do not select the "Outdoor Client mode" control box.

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NOTE

If the “Outdoor Client mode” is not activated (= Indoor Client mode) , all country-specific allowed channels and sender services available in the building are available for operation. In the Outdoor Client mode, selection of the country-specific, available channels and sender services are restricted for operation out of doors.

- Open the "Antenna Type" list box and select "ANT795-4MR (Std. antenna) [3dBi].
  - ➪ In the "Antennal gain (in dBi) text box, "3" is entered automatically.
  - ➪ In the "Antennal cable length (in meters) text box, "0" is entered automatically.
- Click on the <Next>>> button.
  - ➪ The SIMATIC NET "Finished" window is displayed.

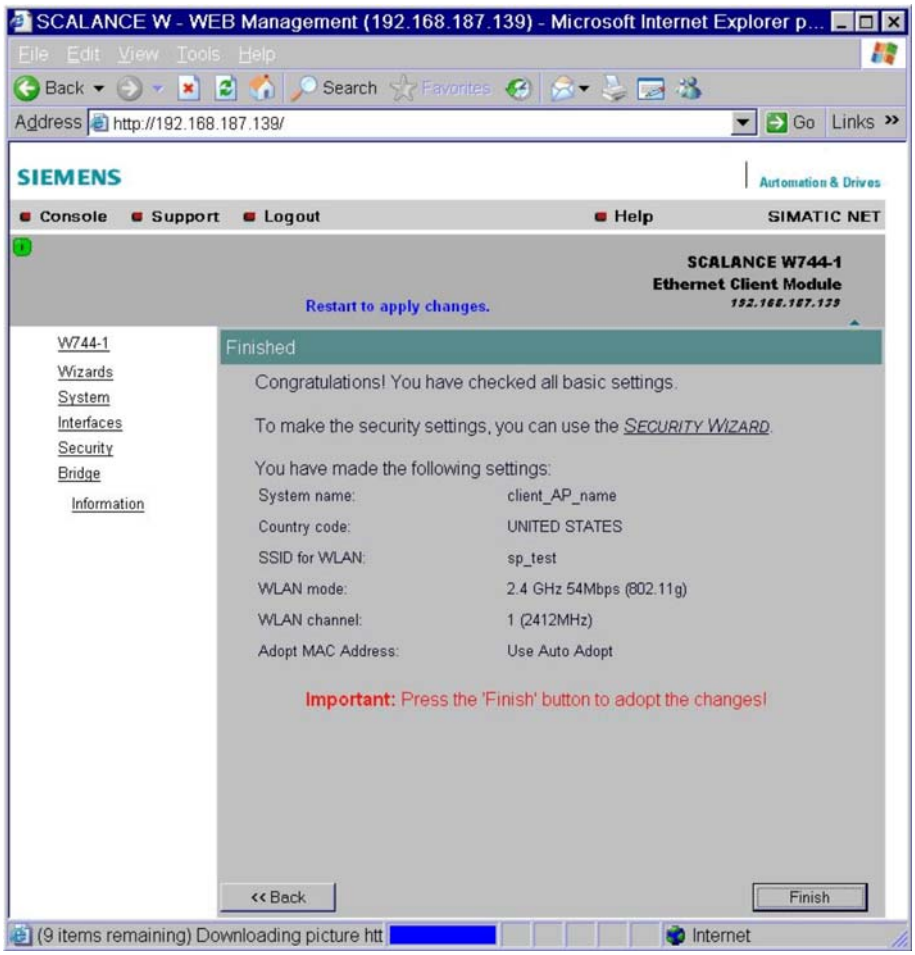

Fig. 55: WLAN Client, "Finished" HTTPS page

- Click on the <Finish> button to transfer the data to the WLAN Client.
  - ➪ The progress of the transfer is displayed in the status display for the window.
- Wait until the transfer and save are completed (several minutes).
  - ➪ The basic programming is completed.
  - ➪ The Security programming still must be performed.

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Security Configuration

- Following configuration of the Basic Settings, the Security Settings must be programmed.

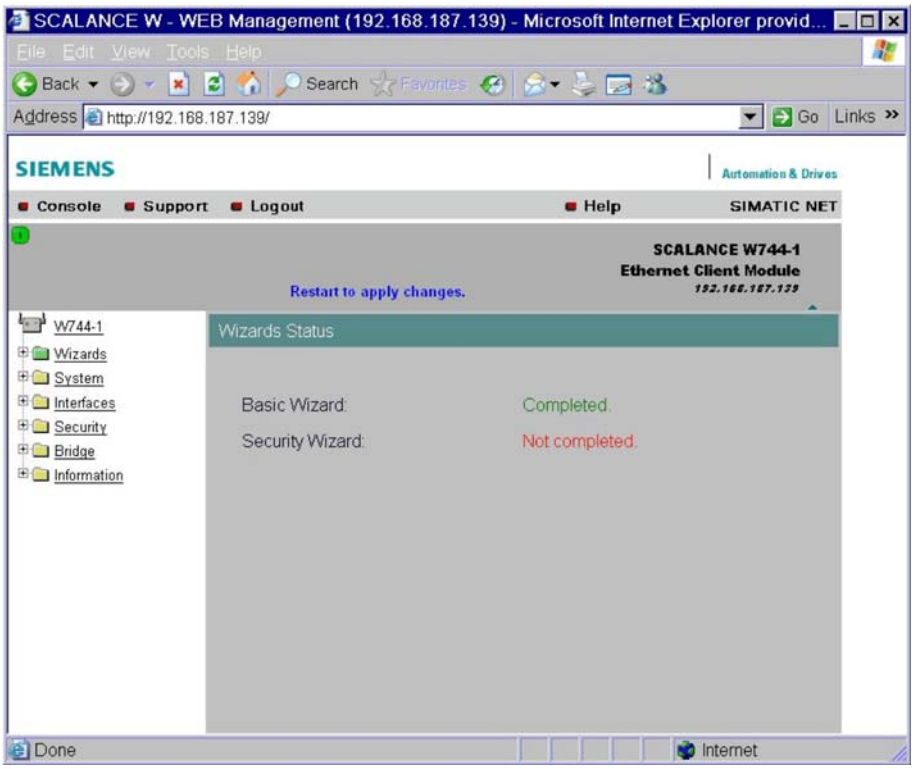

Fig. 56: WLAN Client, "Wizard Status" HTTPS page

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- Click on the <Wizard> - <Security> menus in the Main window of the SIMATIC NET window.

  ➪ The SIMATIC NET "Security Settings" window is displayed.

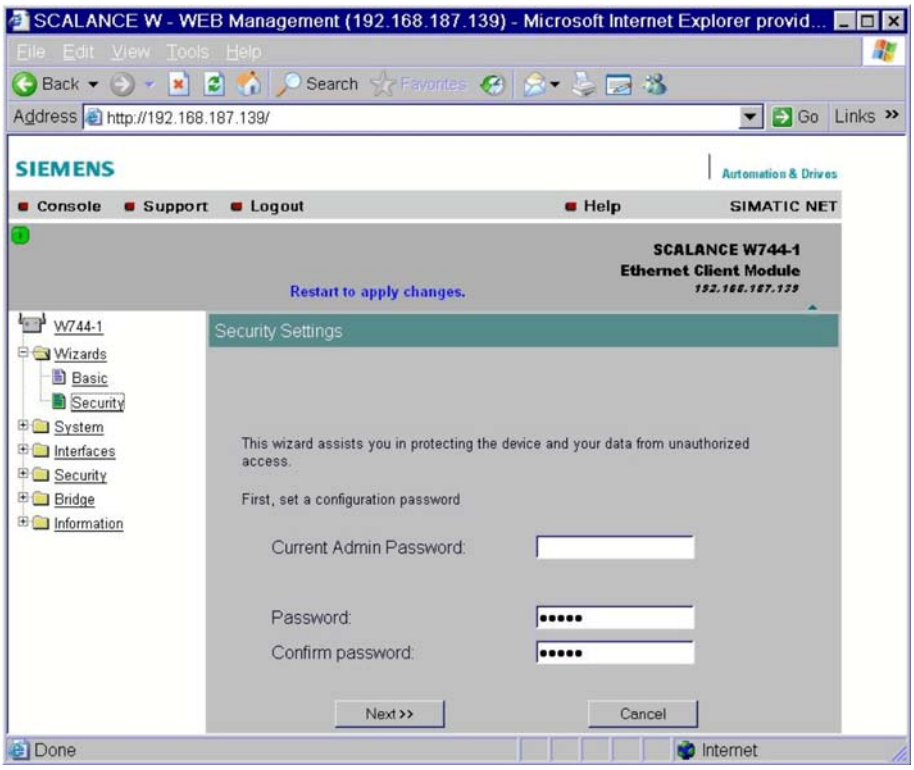

Fig. 57: WLAN Client, "Security Settings" HTTPS page

- Enter administrator in the "Current Admin Password" text line.
- Enter the WLAN Client password in the "Password" text line. See the SP Password List.
- Enter the WLAN Client password again in the "Confirm password" text line.

NOTE

The administrator password can also be changed later at the customer's request. (<System> - <Passwords> menu).

The password may be a max. of 31 characters long. Valid characters are: Numbers 0-9, letters a-z / A-Z, special characters !"#$%&()*+,-./:;<>=?@^_{}| and space.

Any newly assigned Administrator User name and the Administrator Password must be recorded in the "WLAN Network Certificate" in these instructions and should be filed in the ARCADIS System Binder (monitor carriage).

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- Click on the <Next>>> button.

  ➪ The SIMATIC NET "Security Settings for Management Interfaces" window is displayed.

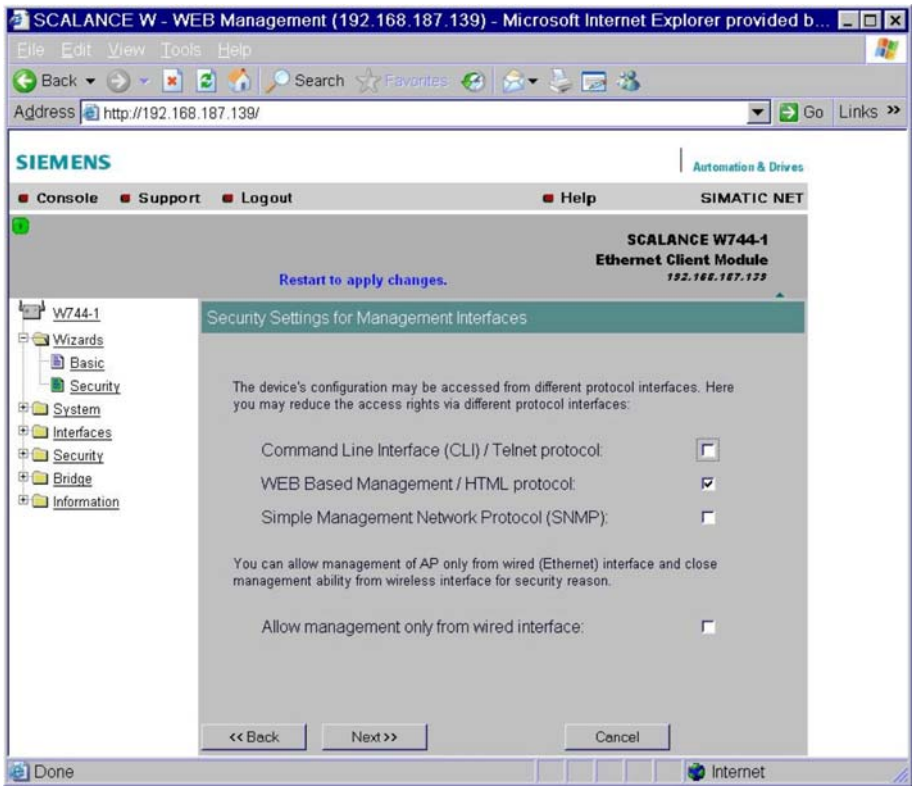
SCALANCE W - WEB Management (192.168.187.139) - Microsoft Internet Explorer provided b...
File Edit View Tools Help
Back Search Favorites
Address http://192.168.187.139/
Go Links
SIEMENS
Automation & Drives
Console Support Logout Help SIMATIC NET
SCALANCE W744-1
Ethernet Client Module
192.168.187.139
Restart to apply changes.
W744-1
Wizards
Basic
Security
System
Interfaces
Security
Bridge
Information
Security Settings for Management Interfaces
The device's configuration may be accessed from different protocol interfaces. Here you may reduce the access rights via different protocol interfaces:
Command Line Interface (CLI) / Telnet protocol:
WEB Based Management / HTML protocol:
Simple Management Network Protocol (SNMP):
You can allow management of AP only from wired (Ethernet) interface and close management ability from wireless interface for security reason.
Allow management only from wired interface:
<< Back
Next >>
Cancel
Done
Internet

Fig. 58: WLAN Client, "Security Settings for Management..." HTTPS page

- Set or delete the "Command Line Interface (CLI) / Telnet protocol" control box per the specifications of the customer's network administrator.
- Set or delete the "WEB Based Management / HTML protocol" control box per the specifications of the customer's network administrator.
- Set or delete the "Simple Management Network Protocol (SNMP)" control box per the specifications of the customer's network administrator.
- Set or delete the "Allow management only from wired interface" control box per the specifications of the customer's network administrator.

NOTE

At least one possible administration must be activated.

Recommendation: Enable administration of the WLAN Client using the HTML Protocol (only "WEB Based Management / HTML protocol" activated) and block administration using WLAN signal connection ("Allow management only from wired interface" activated).

When this is done, administration is possible only via the Ethernet using the integrated HTML server of the WLAN Client (e.g. via the image system PC).

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- Click on the <Next>>> button.

  ➪ The SIMATIC NET "Security Settings for WLAN" window is displayed.

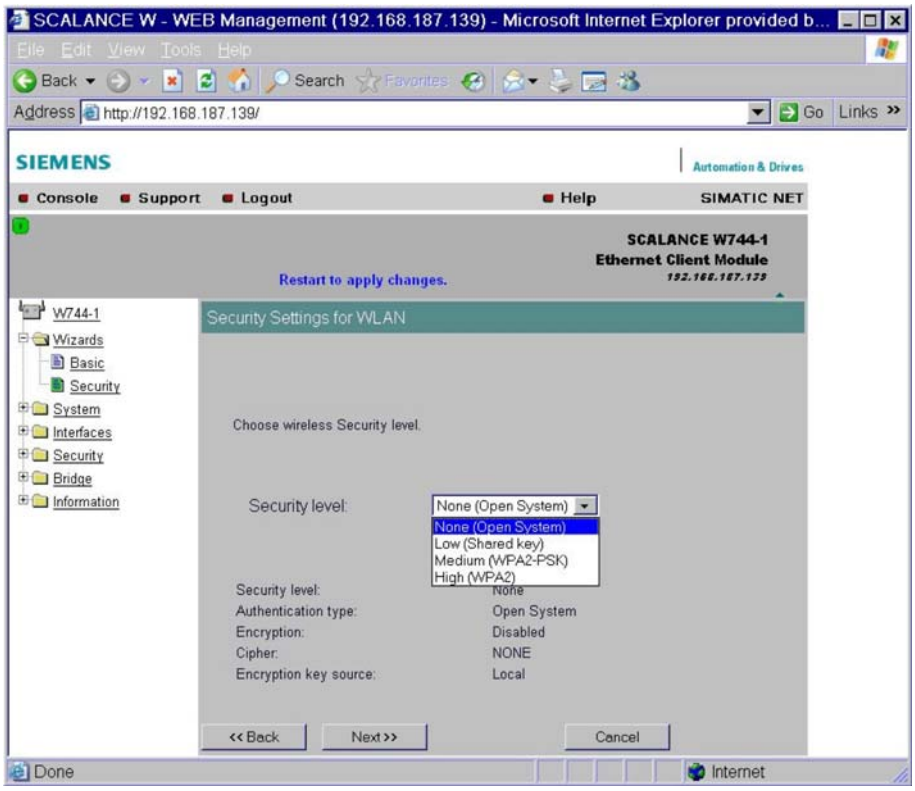

Fig. 59: WLAN Client, "Security Settings for WLAN" HTTPS page

- Select the security level per the specification of the customer's network administrator in the "Security level" list box.

NOTE	**The MID security level (WPA2-PSK) or High (WPA2-RADIUS) is recommended with the RADIUS server configured.**

NOTE	**If using the Security Wizard, 4 safety levels (None, Low, Medium, High) are offered. Other safety levels (combinations from authentification, code type and code origin) can be set after working through the Security Wizard in the Security menus of the SIMATIC NET Web server.**

1. Configuration of the "None (Open System)" Security Level

- No further configuration is required.

NOTE	**No coding, no authentification** **Due to the wide gaps in security, the "None (Open System)" security level should NOT be used!**

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2. Configuration of the "LOW (Shared Key)" Security Level

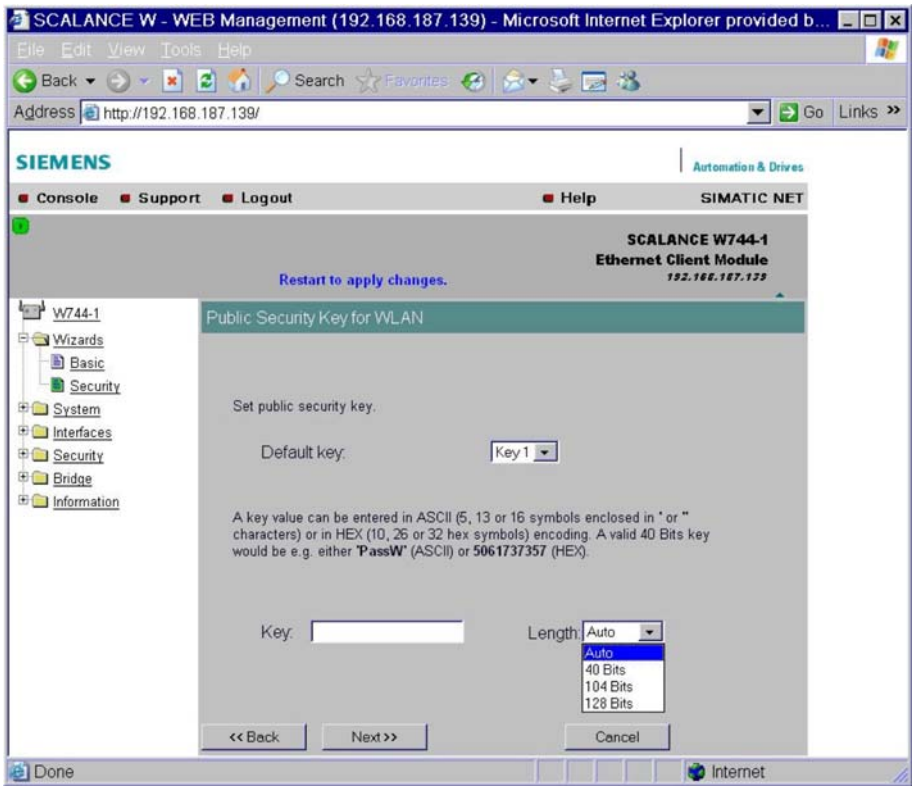

Fig. 60: WLAN Client, "Public Security Key for WLAN" HTTPS page

- Select which key is to be specified in the "Default key" list box (Key 1- Key 4).

NOTE	**If only one key is assigned, select "Key 1".**

- Define the length of the key in the "Length" list box.
  - ➪ 40 Bits (5 ASCII characters or 10 hexadecimal figures (0-F).
  - ➪ 104 Bits (13 ASCII characters or 26 hexadecimal figures (0-F).
  - ➪ 128 Bits (16 ASCII characters or 32 hexadecimal figures (0-F).
  - ➪ AUTO (5 / 13 or 16 ASCII characters or 10 / 26 or 32 hexadecimal figures

NOTE	**If "AUTO" is selected, the maximum key length is 128 Bits.**

- Enter the character string per the definition of the customer's network administrator in the "Key" text box. Admissible characters: All ASCII characters or alternatively hexadecimal figures (0-F). Observe the key length ("Length" list box).

NOTE	**If a key that is too long or too short is entered, an error message appears.**

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3. Configuration of the "Medium (WPA2-PSK)" Security Level

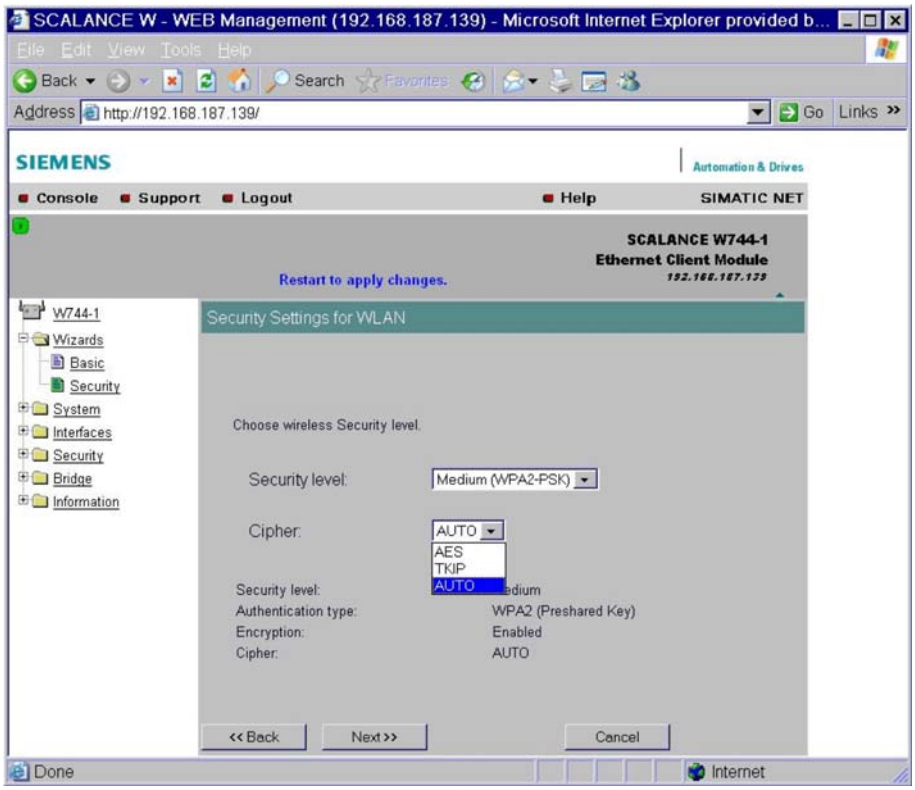

Fig. 61: WLAN Client, "Security Settings for WLAN" (medium) HTTPS page

- Select the code type per the definition of the customer's network administrator in the "Cipher" text box.

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- Click on the <Next>>> button.
  ➪ The SIMATIC NET "WLAN WPA Pass Phrase" window is displayed.

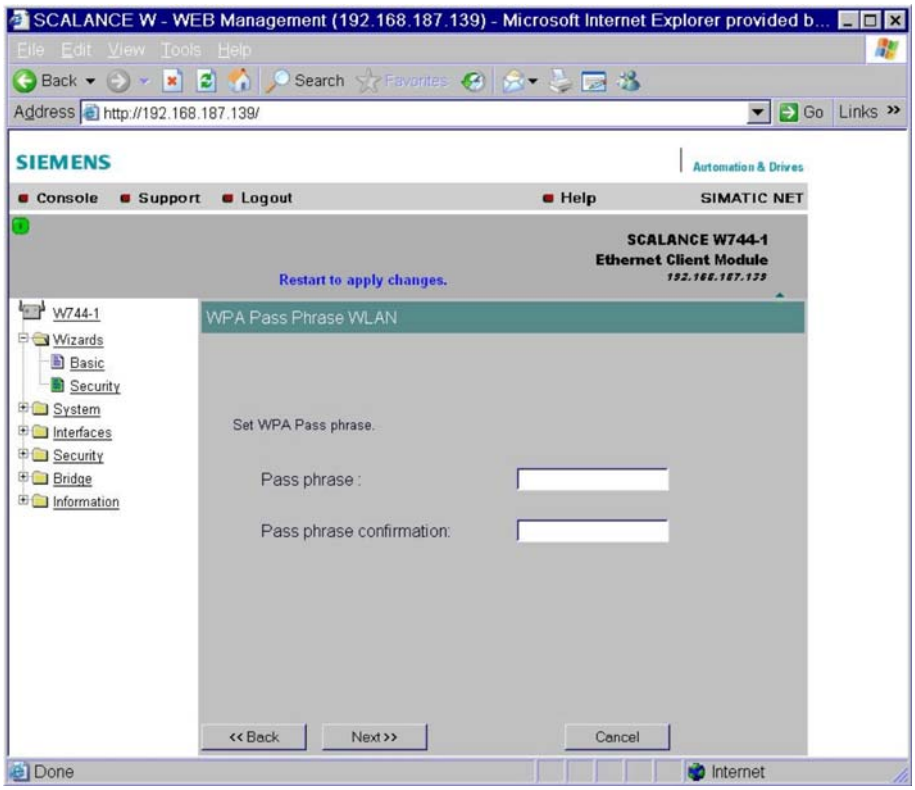

Fig. 62: WLAN Client, "WPA Pass Phrase WLAN" HTTPS page

- Enter the WPA2 code specified by the customer's network administrator in the "Pass phrase" text box.

NOTE	**Length of the "Pass Phrase" initialization code: from 8 to 63 ASCII characters or exactly 64 hexadecimal figures (0-F).** **This initialization code must be known at both the Client and at the Access point.**

- Enter the same WPA2 code again in the "Pass phrase confirmation" text box.

4. Configuration of the "High (WPA2 RADIUS)" Security Level

NOTE	**The "High (WPA2 RADIUS)" security level requires that a RADIUS authentification server is configured.**

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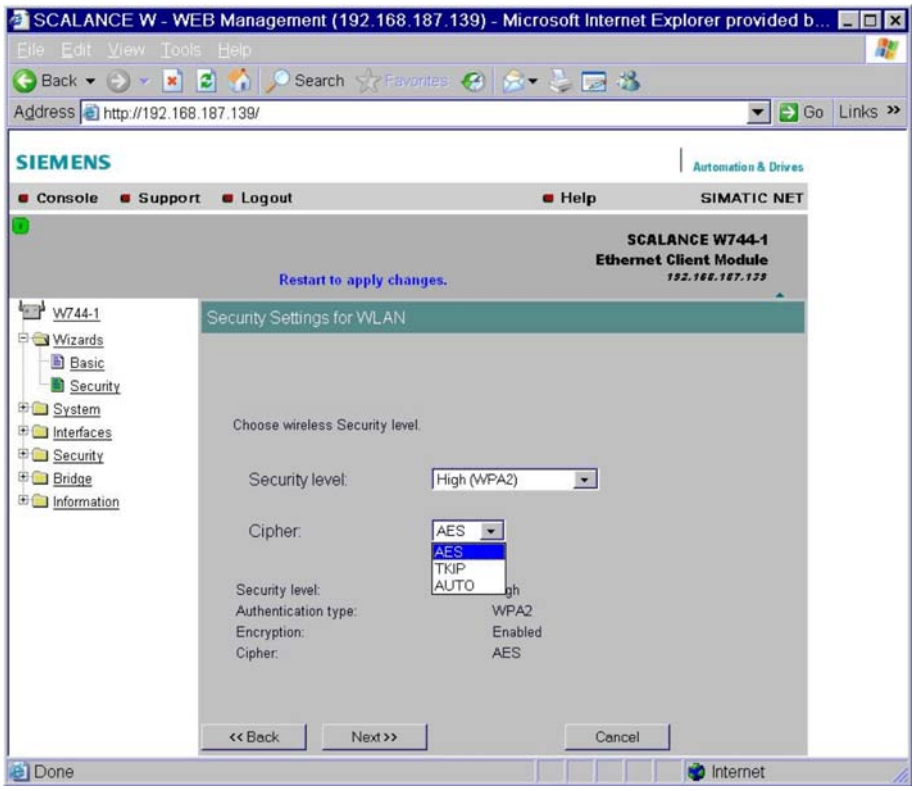

Fig. 63: WLAN Client, "Security Settings for WLAN" (high) HTTPS page

- Select the code type per the definition of the customer's network administrator in the "Cipher" text box.

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- Click on the <Next>>> button.
  ➪ The SIMATIC NET "802.1x User Name and Password Configuration" window is displayed.

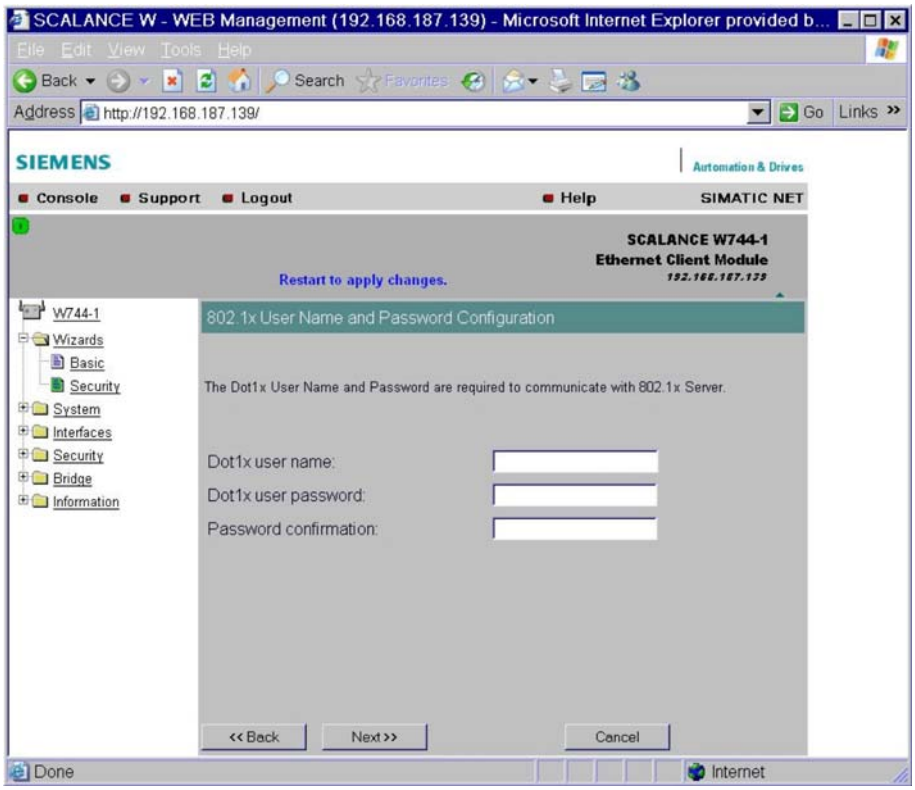

Fig. 64: WLAN Client, "802.1X User Name and Password..." HTTPS page

- Enter the user name specified by the customer's network administrator for logging on to the RADIUS server in the "Dot1x user name" text box.
- Enter the password specified by the customer's network administrator for logging on to the RADIUS server in the "Dot1x user password" text box.
- Enter the password specified by the customer's network administrator for logging on to the RADIUS server again in the "Password confirmation" text box.
- Click on the <Next>>> button.
  ➪ The SIMATIC NET "Following Settings Were Made" window is displayed.
- Again check the entries against the network administrator's specifications.

Ending, Saving and Restarting the WLAN Client

- Click on the <Next>>> button.
  ➪ The SIMATIC NET "Finished" window is displayed.
- Click on the <Finish> button.
  ➪ The SIMATIC NET "Finished" window is displayed.
- Wait until the configurations have been saved. Click on <Finished> again.
- Select <System> in the left menu.

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- Click on <Restart> under <System>.

  ➪ The SIMATIC NET <System Restart> window is displayed.

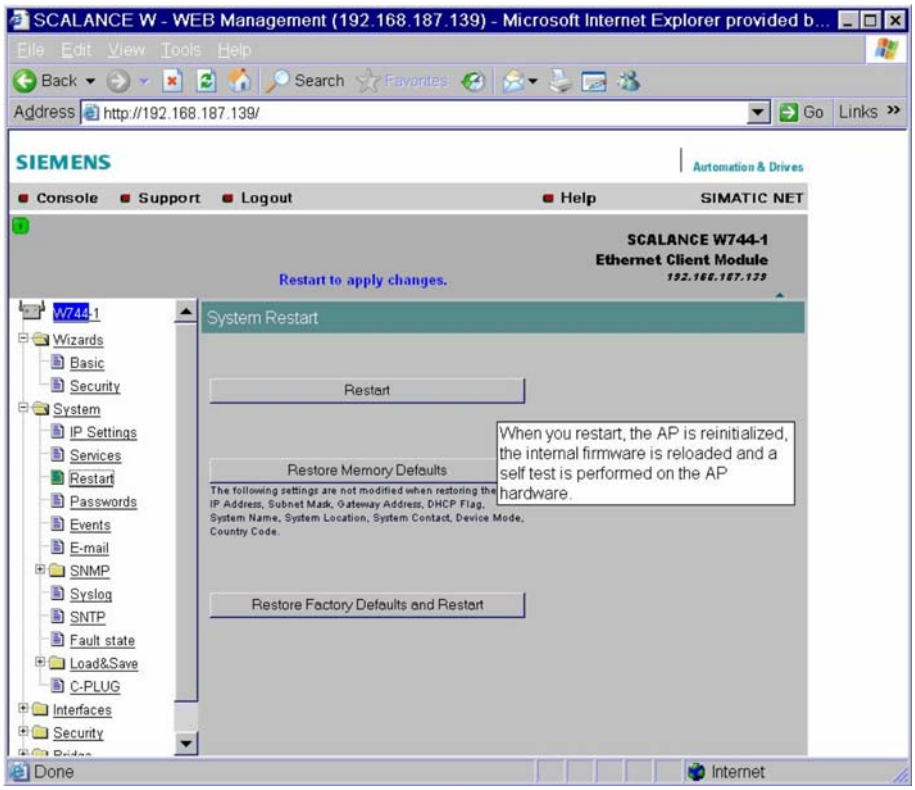

Fig. 65: WLAN Client, "Restart" HTTPS page

- Click on the <Restart> button.

  ➪ The WLAN Client is restarted after 30 seconds. The changes are accepted and are valid with the restart.

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- Following the restart, select the <WLAN> - <Signal> menu.
  - ➪ The SIREMATIC NET "Signal Recorder" window is displayed.

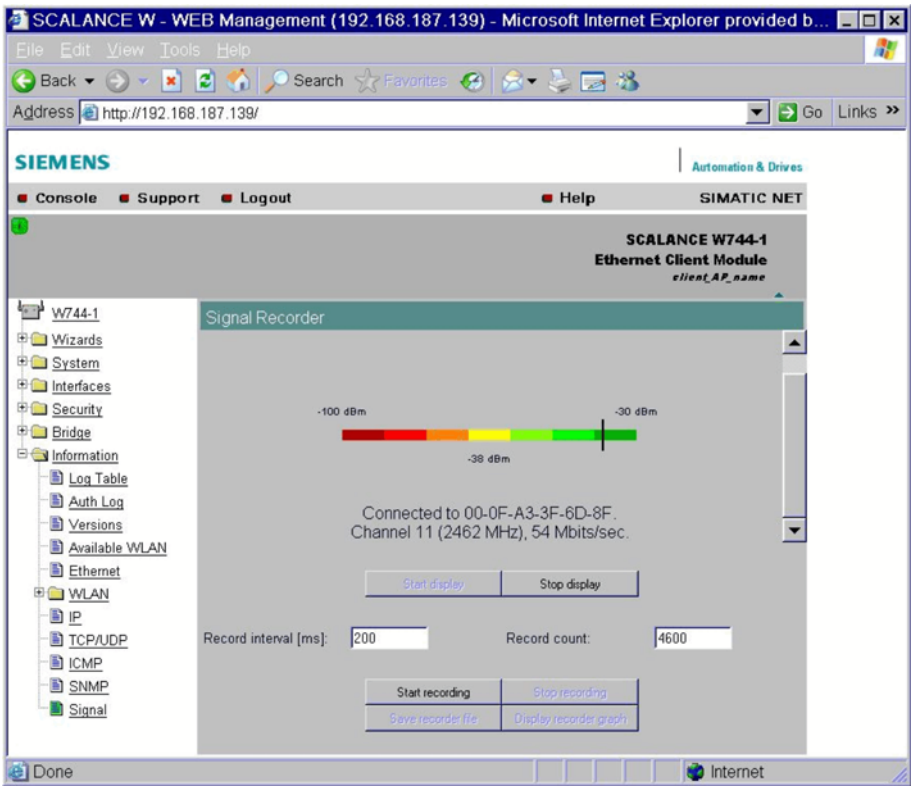

Fig. 66: WLAN Client, "Signal Recorder" HTTPS page

- The signal quality of the WLAN connection is displayed.

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- Select the <Information> - <Available WLAN> menu.
  - ➪ The SIREMATIC NET "List of Access Points" window is displayed.

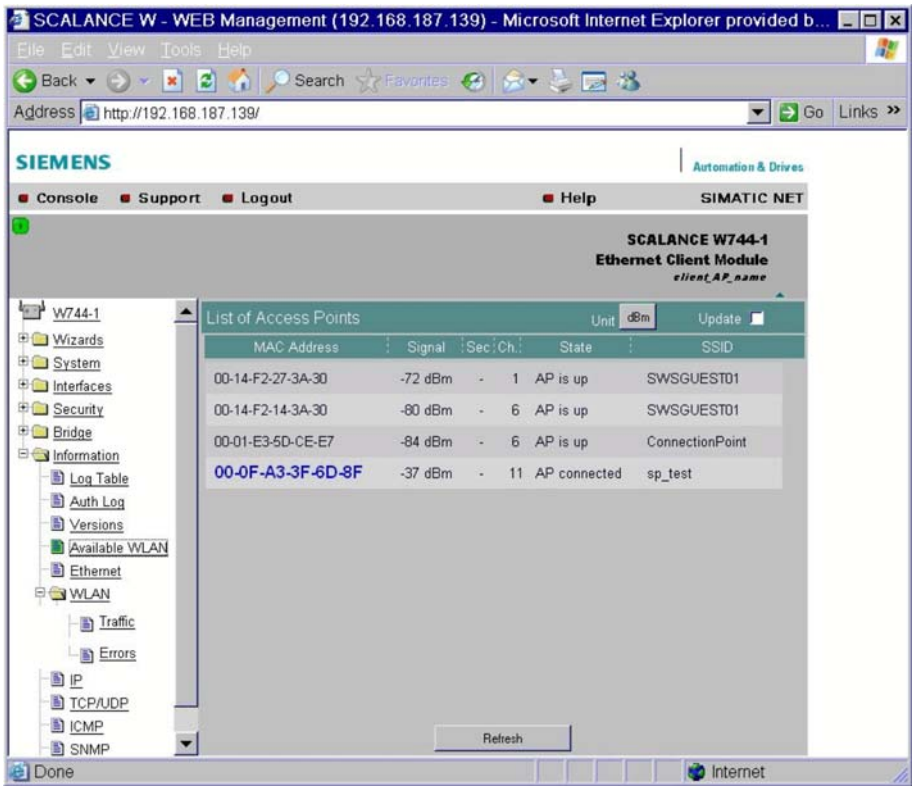

Fig. 67: WLAN Client, HTTPS window, "List of Access Points"

- The WLAN access points in the transmit/receive range are displayed.

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Final Work Steps

Installing all Cover Panels and Ground Wire Check

- Following a successful initial test of the WLAN network connection, install all cover panels and perform a check of the ground wire resistance.
  - ➪ The ground wire resistance may not be below 0.2 Ohm.

Function Test

- Switch off the system.
- Then switch on the system again and wait for it to boot up.
- Test the WLAN connection in the vicinity of a customer access point. To do this, access the DICOM nodes set up in the system (transmit / print / receive).

NOTE	**In difficult WLAN network connections, you can again shut down the Syngo application and log on to the WEB server for the WLAN Client using Internet Explorer. After selecting the <WLAN> - <Signal> menu, read the quality of the WLAN network connection. Here, operate the "Stand-alone" monitor carriage. The monitor carriage can then also be moved easier in the room.**

- Test the WLAN connection to all user locations that were specified by the user by accessing the DICOM nodes that have been set up (transmit / print / receive).
  - ➪ Inform the customer of all bad or of individual bad WLAN network connections that have been specified by the customer as user locations. Please record any corrective measures discussed with the customer, for example improvements made to the WLAN network topology, in the Comments lines.

Recordings

- Record the user locations for the ARCADIS system (location in the hospital / Room No. / Room designation) defined by the customer. See the next page.
- Record the functionality of the WLAN network connection at the specified user locations for the ARCADIS system. See the next page.

Handover to the Customer

- Hand the documents (Operator Manual) included in the shipment over to the customer.
- Inform the customer that a parallel WLAN network connection and cable network connection are not possible. Also inform the customer about the WLAN Client network switch.

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WLAN Network Certificate

Fill out the certificate and file it in the ARTCADIS System Binder.

Product Name	ARCADIS _____	(Varic / Orbic / Avantic)
Product Serial Number	 _____	Installation date: _____
Customer	 _____	
Customer ID	 _____	
Building / Floor	 _____ / _____	
Department	 _____	
User location 1	 _____	WLAN network connection Okay? yes/no WLAN signal quality _____
User location 2	 _____	WLAN network connection Okay? yes/no WLAN signal quality _____
User location 3	 _____	WLAN network connection OK? yes/no WLAN signal quality _____
User location 4	 _____	WLAN network connection OK? yes/no WLAN signal quality _____
User location 5	 _____	WLAN network connection OK? yes/no WLAN signal quality _____
Administrator User Name	 _____	
Administrator Password	 _____	

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Comments	
Name of the CSE	
Date	
Signature of the CSE	

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WLAN Client Network

WEB Server Login Data	Value / Name	Comments
Default Administrator Name	Admin	Default Administrator User name (status when shipped)
Default Administrator Password	See the CS Knowledge Base, SP Password List.	Default administrator password (status when shipped)
New administrator name	_____	New administrator user name
Administrator password	_____	New administrator password

Name	Value	Comments
IP address	_____._____._____._____	Permanent IP address of the WLAN Client
Subnet Mask	_____._____._____._____	Subnet Mask
DHCP	yes/no	DHCP not released

WLAN Client Basic Wizard Data	Value	Comments
System name	_____	WLAN Client name in the network
Country code	_____	WLAN Client country Must be entered. Country-specific approval of the WLAN signal network
Connect to any SSID	yes/no	Yes: WLAN Client connects to the access point that permits the best possible data transfer and to which a connection is allowed based on the security settings.
SSID	_____	WLAN Client SSID

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WLAN Client Basic Wizard Data	Value	Comments
Wireless mode	Select from: 5GHz, 54Mbps (802.11a) 5GHz, 108Mbps (802.11a Turbo) 2.4 GHz, 11Mbps (802.11.b) 2.4 GHz, 54Mbps (802.11.g) 2.4GHz, 100Mbps (802.11g Turbo)	Select the wireless mode according to the existing WLAN infrastructure.
MAC mode	Select from: Auto find 'Adopt MAC' Set 'Adopt MAC' manually	Auto find 'Adopt MAC' should be selected. The WLAN Client automatically accepts the source MAC address of the first telegram that was received over the Ethernet interface. Select "Set 'Adopt MAC' manually only at the special request of the customer.
Adopt MAC	_____	Required only after selecting "Set 'Adopt MAC'".
Antenna Type	ANT795-4MR (standard antenna) [3dBi]	Antenna type included in the WLAN Client shipment
Antenna gain (in dBi)	3	Already pre-set after selecting the antenna type.
Antenna cable length (in meters)	0	Already pre-set after selecting the antenna type.

WLAN Client Security Wizard Data	Value	Comments
Current Admin. Password	Admin	Default administrator password (status when shipped).
New Admin. Password	_____	New administrator password (customer-specific), max. 31 characters, Admissible characters: ASCII Code 0x20 - 0x7e

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WLAN Client Security Wizard Data	Value	Comments
Security Settings for Management Interface	Selection (also possible more than once): Command Line Interface (CLI / Telnet protocol - yes/no WEB Based Management /HTML protocol - yes/no Simple Management Network Protocol (SMNP) - yes/no	With selection, the protocol interface to the administration of the WLAN Client is defined. At least one protocol interface must be selected. Recommendation: Select at least WEB Based Management /HTML protocol.
Blocking Administration via the Wireless Network	Allow management only from wired interface - yes/no	With selection, the WLAN Client can be administered only via the Ethernet connection.
Security level	Select from: None (Open System) Low (Shared key) Medium (WPA2-PSK) High (WPA2 RADIUS)	Select the appropriate security level. The None and Low security levels are NOT recommended! Note: Other combinations comprised of authentification, code type and code origin can be configured manually in the Security menus of the WLAN Client WEB server.
Low Security Level Default key Length Key	 Select from: Key 1- Key 4 Select from: 40, 104 or 128 Bit _____	 Select Key 1. A max. of 4 keys can be saved. 40 Bit: 5 ASCII characters or 10 hexadecimal figures (0-F). 104 Bit: 13 ASCII characters or 26 hexadecimal figures (0-F). 128 Bit: 16 ASCII characters or 32 hexadecimal figures (0-F). Depending on the "Length" selection, enter the appropriate key in the listed length.
Security level Medium Pass Phrase	 _____	Enter the WPA2 key. Length: 8 to 63 characters or exactly 64 hexadecimal figures.

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WLAN Client Security Wizard Data	Value	Comments
Security level High Dot 1x user name Dot 1x user password	_____ _____	User name to login on the RADIUS server Password to login on the RADIUS server
Other Security Configurations	_____ _____ _____ _____ _____	If another combination comprised of authentification, coding procedures and code origin are required that do not meet the specifications of the Security Wizard in the security level offered, the required configurations can also be entered or changed manually after running through the Security Wizard during startup in the Security menu item. The customer's network administrator can defined the required data in the following lines.

Notes:

_____

_____

_____

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